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TWENTY-FIRST EDITION

MANUAL OF HARMONY

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A PRACTICAL GUIDE TO ITS STUDY, PREPARED ESPECIALLY FOR THE

CONSERVATORY OF MUSIC AT LEIPZIG

BY

ERNST FRIEDRICH RICHTER

EDITED BY

ALFRED RICHTER

TRANSLATED FROM THE TWENTY-FIFTH GERMAN EDITION

BY

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TRANSLATOR'S PREFACE

In view of the surprising history of this Manual of Harmony it is hardly necessary for the Publishers to apologize for offering an entirely new English edition to the musical public of America.

The first German edition was issued in 1853; the twenty-fifth German edition, in 1907. Thus, after being subjected for over half a century to the sharp criticism and severe tests of German musical scholarship, to say nothing of the competition of very numerous newer text-books, this remarkable work is still so highly considered at home as to warrant the publication of an edition newly reset from beginning to end.

It seems probable that this twenty-fifth German edition, from which our present translation was made, is practically a definitive one. Like all the more recent issues, it was revised and edited by the Author's son, Alfred Richter, whose experienced hand has progressively added much of lasting value to the original treatise. Chief among these additions should be mentioned the chapter on Forms of the Musical Close; and, furthermore, the separate volume of "Additional Exercises" (*Aufgabenbuch*).

Despite all gradual accretions, the *method* of the Manual (which might be described as "genial empiricism") has been left unaltered. In its voluminous array of illustrative examples it still remains unrivalled. What was thought by many instructors to be a paucity of exercises for working out, has been remedied by the above-mentioned volume of "Additional Exercises," with its Key. To the exercises contained in the Manual itself, a Key in English has also been published. Consequently, aids of an unusually helpful sort are offered to both teacher and student. There is also retained, of course, the tendency to occasional digression into subjects rather beyond the ken of the average harmony-pupil. And just here the judicious teacher has to assert himself — restraining, correcting, suggesting — and turn these possible stumbling-blocks into actual stepping-stones by so enlisting the student's imaginative faculty as to render even mechanical details interesting and instructive in a higher sense.

FROM THE PREFACE TO THE FIRST EDITION

The foremost reason for the publication of this Manual of Harmony is set forth in the subtitle. The aim was to provide the students, in connection with the practical course in the theory of music, with a handbook containing explanations of the material treated in the lectures, and facilitating the review of the latter. The author conceives that such a textbook should contain what is fundamental and most essential in musical theory, presented briefly, yet in as complete a form as possible; and that these fundamental features should always be accompanied by references to and directions for their working out in practice, to fit the student for later attempts at composition.

This book contains no scientifico-theoretical treatise on harmony, but, although based on the firm foundation common to all methods of harmony, is intended solely for *practical* ends, which would seem very difficult to attain by abstract scientific study with our present meagre equipment.

True, mathematical precision in musical rules has ever been eagerly sought after; and the rising generation especially, opposed to traditional authority, would have everything made clear beyond a doubt, however much they dislike, on the other hand, to have the exuberant life of Art laid bare to eye and understanding by the dissecting-knife. And it cannot be denied that in this respect there is a hiatus in musical literature which no one has as yet succeeded in filling up. Hitherto all attempts of this nature have failed to create a really tenable scientifico-musical system wherein, by means of one fundamental principle, all phenomena in the domain of music should be represented as invariably necessary resultants; what philosophers, mathematicians and physical scientists have achieved is noteworthy, to be sure, but either so isolated as to frustrate the assembling of the separate parts constituting the Whole, or too abstract — bearing less on music itself than on other matters — taking too little account of matters properly musical and which are of most interest to musicians, despite the understanding of things musical shown in these researches. Again, the scientific groundwork in musical textbooks has been found wanting, partly because, being an application of merely individual learned investigations, it was equally impotent

to establish a system complete in itself and yielding absolutely certain results, and partly because its phantastic construction had no firm scientific foundation.*

Strictly speaking, however, this need is felt only by the advanced and educated musician interested in theoretical research, and is of less consequence to the immature student, whose development will not suffer from it at present. The above-mentioned disposition to question authority might be considered, to a certain degree, on a par with that childish insistence which, prompted by excessive curiosity, seeks to fathom the origin of all things by questions seldom to be answered intelligibly in view of the questioner's stage of education. Our student must devote his entire energy to his technical development; for it will cost him time and trouble enough to attain the standpoint whence he may advance with greater ease to true artistry. For him the important question is not "why?" but "how?" — he must learn to understand the necessity of certain rules by experience and from the best models, not by (theoretical) calculation. Later, when education, acquirements, ability and vocation shall demand it, it will be time to investigate the "why"; and then all the knowledge gained by experience will be an aid not to be despised in the search for the natural laws governing music.

With this practical aim in view the author has endeavored to present the laws of harmony, and the teachings drawn from observation and experience, in a clear and simple manner, and — as he intended the book for study — to let the principles contained therein operate through their own force, without attempting to win a wider circle of readers by clothing them in especially learned language or an attractive form. These exercises extend to the beginning of the studies in counterpoint; a Manual of Counterpoint forms a sequel to the present volume.

In conclusion, a word to the disciple of art; spoken seriously, but meant for his good.

Our object is to reach a distant goal — the actual production of works of art. Hard work and perseverance are required to grasp the elementary principles of music, and to mould what we have learned and assimilated into living musical forms. Poetically gifted minds, saturated with the creations of the great masters, will bitterly deceive themselves if they think to pluck the flowers of art without having gained a thorough knowledge and command of the technical resources; if they fancy that the hallowed charm overspreading the art-work will suffer from an analysis of the musical material, or that the primitive natural forms of

*Here we may be permitted to call attention to a work which seems adapted to meet a palpable need: "Die Natur der Harmonik und Metrik," by Moritz Hauptmann.

this latter can never develop into the beauty they aspire to. No talent has ever soared to those heights whereon alone the achievements of art may thrive, without thorough knowledge; — which, of course, it was easier for him to acquire than for those less gifted. It is not artistry to do things without understanding; that is merely the operation of instinct, which will inevitably discover the lack of thorough training. The clever idea cannot dispense with form; and it is this form which we must learn to recognize and wield. And although the form often intuitively accompanies invention, in music it is more needful than in other matters to analyze the idea logically, as it were, to remodel it into new forms, to transform it in most manifold wise. Even he who is musically gifted must acquire a knowledge of these things and skill in their employment; and these he can obtain solely by taking pains to learn the laws of music and what others have discovered long before, and to try to imitate and develop it. Earnest, persevering application and, above all, a rational, methodical development to maturity of conception and the creation of living art-works, will assuredly lead students who are musically gifted to the goal of their ambition.

ERNST FRIEDR. RICHTER

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MANUAL OF HARMONY

INTRODUCTION

Among the elements taught in a general course in music, and an acquaintance with which should precede the study of harmony, the Theory of Intervals stands in closest relation to that study, and shall now be briefly and concisely explained.

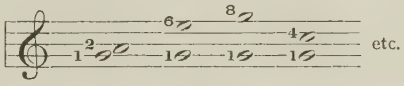
The Intervals

An interval is the distance between two tones; that is, the difference in their pitch.

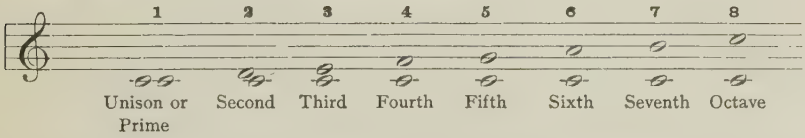
The width of an interval is determined, firstly, by the number of degrees occupied by the two tones; the lower tone being generally regarded as standing on the first degree, and the interval determined by counting up the diatonic degrees to and including the degree on which the higher tone stands.

Note. — By "diatonic" degrees is meant the series or succession of tones as they appear in the scale of any major or minor key.

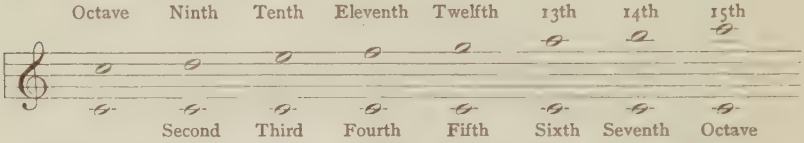
Let us assume *g*, for instance, as the lower tone standing on the first degree; then the *a* next above would be on the second degree, the *e* above that on the sixth degree, etc.



The series of degrees resulting from this process would be numbered as follows:



As a rule we count the degrees only to the Octave, and begin the series over again with the notes lying above the Octave, continuing in like manner for each new octave; thus the ninth degree becomes a Second, the tenth a Third, the eleventh a Fourth, etc.; then the fifteenth an Octave again, the sixteenth a Second, and so on.

However, for certain reasons explained in the harmony-course and in the general theory of music, we sometimes prefer to name tones beyond the compass of an Octave according to the actual numbers of their degrees. From the Octave onward, therefore, the series of tones would bear a double set of names:

Wider intervals are simply reduced to their ratio in the lower octave.

The More Precise Determination of the Intervals

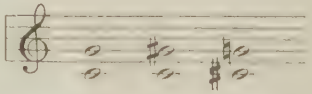
It is evident that the above presentation of the Intervals is founded on the diatonic scale of *C* major, and does not show the relations of the tones lying between the scale-tones. Moreover, all the intervals were reckoned only from the first tone in the diatonic scale, whereas any scale-tone may be taken as the lower tone. Now, by starting with another tone, we shall not only have different tones forming the series of intervals, but also find certain differences in the width of the intervals themselves.

In order to obtain a clear idea of these various differences, carefully note the following fundamental principles:

The series of intervals shown above, the lower tone being the first tone of the major scale which in itself forms the series, serves as a standard for determining all intervals. Some of the intervals in this series are called "major," the others, "perfect."

Every chromatic alteration of these tones, whether the higher or the lower, changes neither the number of the degree nor the basic name of the interval, but does require the use of a special additional designation of the interval.

For instance, when a sharp is set before either member — the higher or lower tone — of the Fifth *c–g*, the interval remains a Fifth; but, being evidently a different kind of Fifth from what it was at first, it must have a special designation.



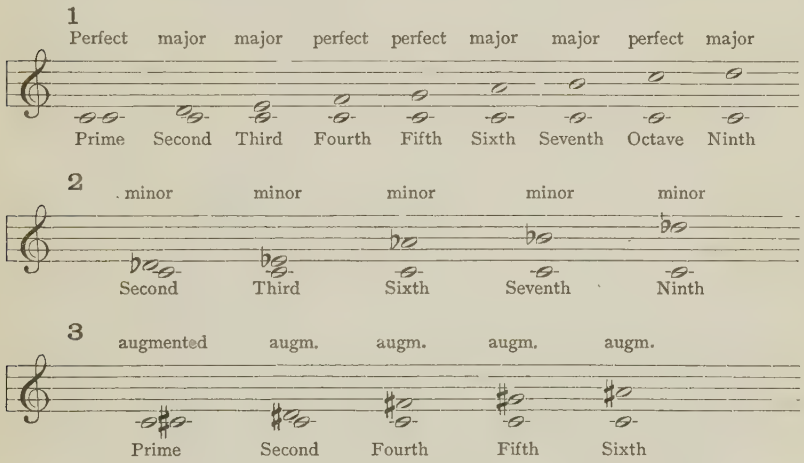
Now, as such alterations of intervals occur, by chromatically raising or lowering either member, or both members, we employ the following special designations for the various kinds of intervals.

(1) Seconds, Thirds, Sixths, Sevenths and Ninths as they occur in the major scale when the *first tone* is taken as the lower, are called *major;* Primes, Fourths, Fifths and Octaves are called *perfect.*

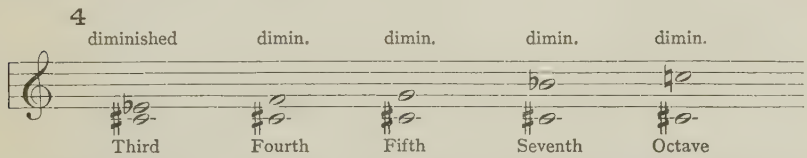
(2) By *lowering* the higher tone of any major interval by a chromatic semitone, it becomes a *minor* interval.

(3) By *raising* the higher tone of any major or perfect interval by a chromatic semitone, it becomes an *augmented* interval.

(4) By *raising* the lower tone of most perfect and minor intervals, they become *diminished* intervals.


1
Perfect major major perfect perfect major major perfect major
Prime Second Third Fourth Fifth Sixth Seventh Octave Ninth
2
minor minor minor minor minor
Second Third Sixth Seventh Ninth
3
augmented augm. augm. augm. augm.
Prime Second Fourth Fifth Sixth

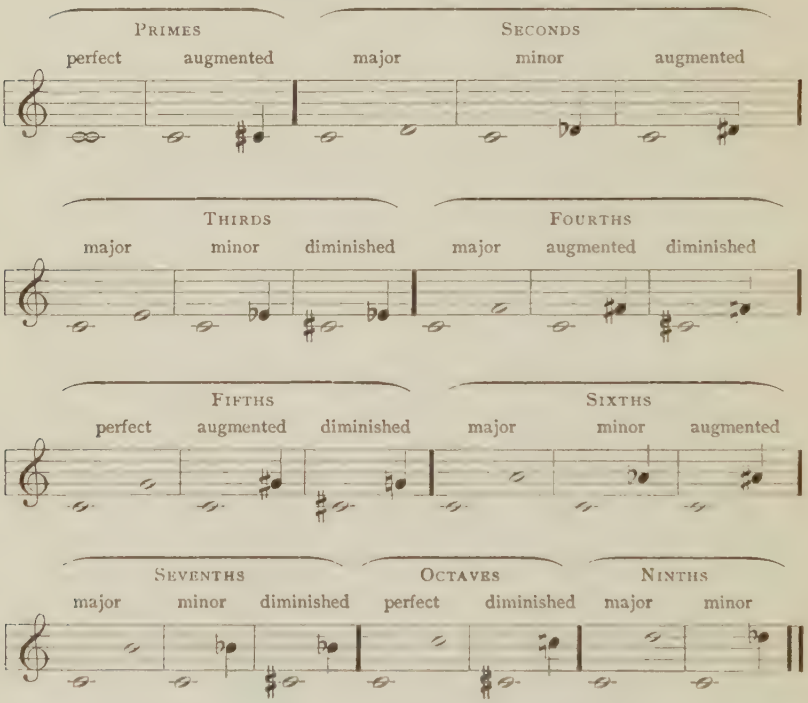
N.B. — Augmented Sevenths, Octaves and Ninths do not occur in harmonic relations; augmented Thirds only in exceptional cases (see Note after the Exercises, No. 189) where the perfect Fourth can nearly always be substituted. The augmented Prime is also impossible as the member of a triad; though the progression to the augmented Prime — which consists merely in chromatically raising the given degree — is a frequent and familiar occurrence.



NOTE. — Diminished Primes, Seconds and Ninths are harmonically inconceivable, although they can occur in melodic combination, that is, as an interval formed by one tone progressing to another (a "melodic" interval), but not where both tones are sounded together (an "harmonic" interval). The diminished Octave is often met with as a suspension (compare No. 223, Ex. b), but is impossible in an harmonic union. The diminished Sixth, like the augmented Third, occurs only in exceptional cases, in which the perfect Fifth may generally take its place, as the perfect Fourth is substituted for the augmented Third.

NOTE ON THE FORMATION OF DIMINISHED INTERVALS

The reason why the *lower* tone is raised in forming a diminished interval, despite the fact that a similar interval would be formed by lowering the higher tone, derives from the peculiar relations arising from the inversion of all the intervals; of which more shall be said further on.

View and Classification of the Intervals Most Used

Division of the Intervals into Consonances and Dissonances

When we speak of consonant and dissonant intervals in music, we do not mean "well-sounding" and "ill-sounding" (which both these terms might also express). A consonant interval is one whose tones are in so pure and satisfactory relation as to require no further special connection with any other intervals as a necessary completion of their harmony; a dissonant interval is one which does suggest and require a special progression (connection with some other interval), without which it would leave an impression of incompleteness. The same is true of the several chords, which are consonant or dissonant according to the composition of their intervals.

The consonances include all the intervals called perfect, together with the major and minor Thirds and Sixths. The perfect intervals are sometimes called complete consonances; the others, incomplete consonances.

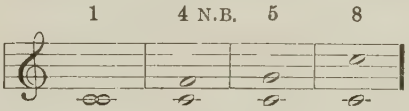
The dissonances include the major and minor Second, the major and minor Seventh, and all augmented and diminished intervals.

Hence the following Table.

1. CONSONANCES

a. Complete

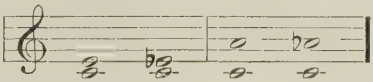
The Perfect Prime, perfect Fourth, perfect Fifth, perfect Octave.



N.B. — Details concerning the peculiar relation of the Fourth will be given later in the course.

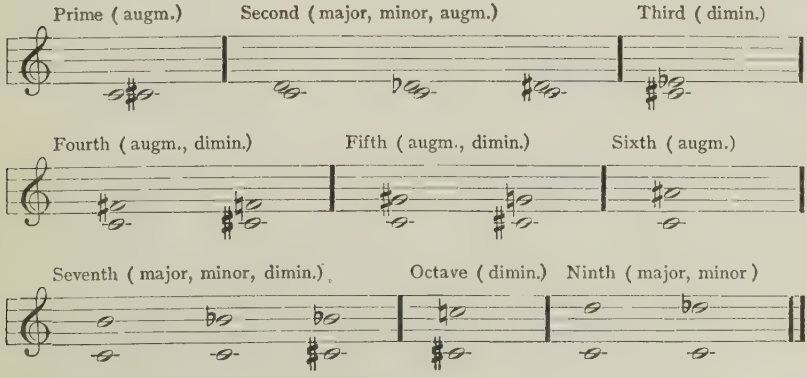
b. Incomplete

The major and minor Third, the major and minor Sixth.



2. DISSONANCES

The augmented Prime, the major, minor and augmented Second, the diminished Third, the augmented and diminished Fourth, the augmented and diminished Fifth, the augmented Sixth, the major, minor and diminished Seventh, the diminished Octave, the major and diminished Ninth.

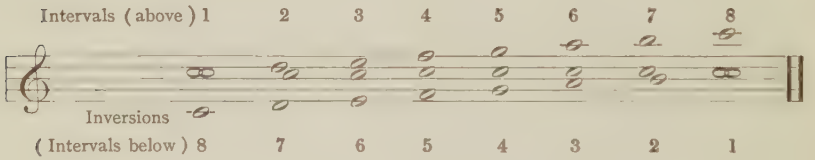


Inversion of the Intervals

As we said before, in determining the intervals we generally begin on the lower tone. But if it seems desirable, for any reason, to determine the relation of two tones from the higher tone, the result is called "the interval below."

For example: *d* is the Fifth of *g*, while *g* is the "Fifth below" *d*. Evidently, this can make no change in the interval itself.

But the matter is different when the higher tone of the interval is lowered by an octave and set below the formerly lower tone — that is, *inverted*. Such inversion being especially considered in certain kinds of composition, it shall be explained here.

The inversions of the intervals formed by the diatonic major scale would assume the following form:

We thus obtain the following series of numbers:

1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1

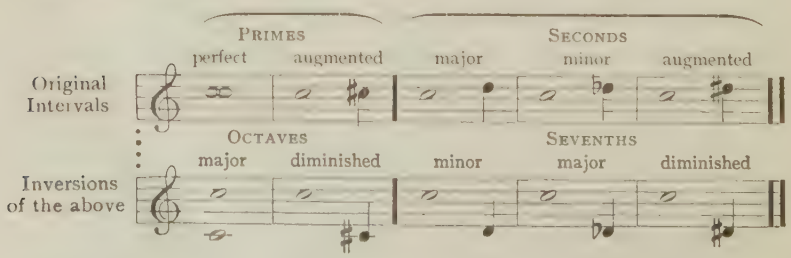
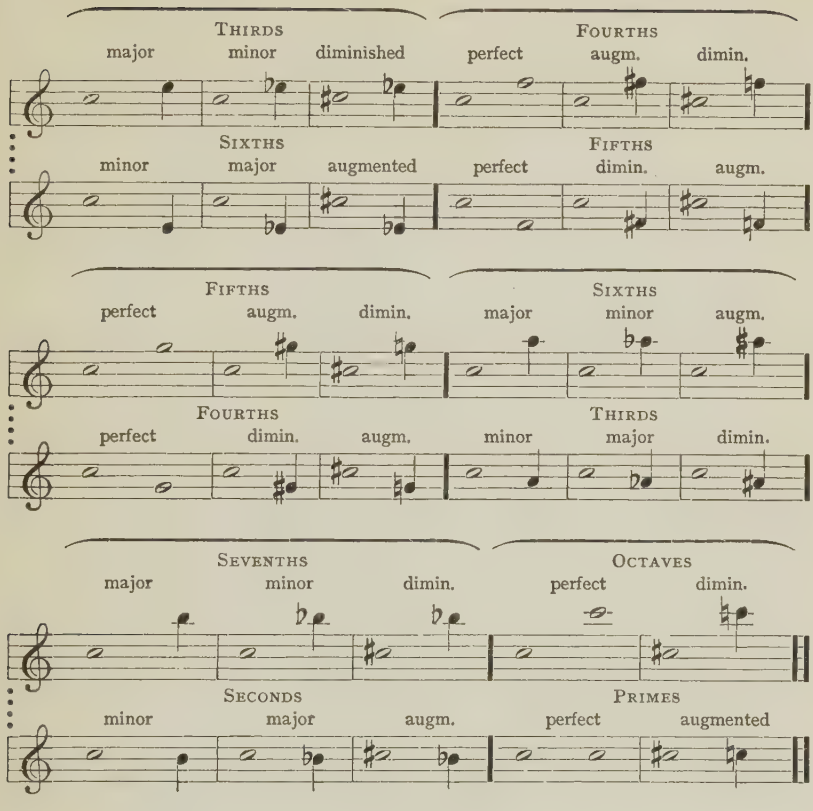
which signifies, that by inversion the Prime becomes an Octave, the Second becomes a Seventh, etc.

Taking the inversion of the major scale as a basis, the following should be noted concerning all the intermediate intervals.

(1) All *perfect* intervals remain *perfect* when inverted by an octave.

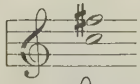
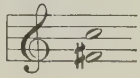
(2) All *major* intervals become *minor;* all *minor* become *major;* the *augmented* become *diminished;* and the *diminished* become *augmented*.

The Table below gives a clear view of all the inversions.



Precise, positive knowledge of these essential inversions of the intervals is not solely of importance for the exercises in double counterpoint, but even in the case of simple harmonic construction will greatly facilitate comprehension and insight. Their study is, therefore, urgently recommended.

Here a few observations may be introduced.

From the above Table of Inversions it is easy to see why all the *diminished* intervals in the first Table (p. 4) were formed by raising the lower tone by a chromatic semitone, instead of lowering the higher tone. As the diminished intervals become augmented by inversion in the octave, the above manner of forming them arises naturally. For example, the augmented Fourth  must necessarily become, on inversion, the diminished Fifth

Similarly, the *perfect* Fourth belongs originally to the consonances, being transformed by inversion into a *perfect* Fifth; precisely as the perfect Fifth can produce only the perfect Fourth, and as, in fact, a dissonance can never result from a consonance by inversion in the octave. Special mention is made of this interval (the Fourth) because in certain cases (to be taken up later) the Fourth requires to be handled like some dissonances; a circumstance which caused certain theorists of former times to classify it among the dissonances.

It will be equally clear that neither the augmented Octave nor the Ninth can be inverted, as they cannot become "lower" intervals, but even when transposed downward by an octave remain "upper" intervals.

Other modes of inversions, as by a Tenth or a Twelfth, which lead to quite different results, can be passed over at present as having no bearing on our harmony-course.

As a complete and positive knowledge of all the intervals is indispensable for the following studies in harmony, practice in writing them, and also in the oral solution of given intervals, will greatly facilitate a correct and intelligent comprehension; and such exercises should be taken up repeatedly.

LESSONS IN HARMONY

Groups of tones, formed by combining various intervals according to certain fundamental rules, and sounded together, are commonly called Harmonies, or Chords.

The theory of harmony explains the species and forms of the chords, and shows how they are naturally employed; that is, how they are correctly and naturally interconnected in passing from one to the other, how they are resolved into and blended with one another.

PART I

The Fundamental Harmonies and the Chords Derived from Them

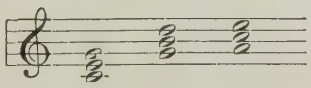
Among the different kinds of chords which can be used for the harmonic foundation of a composition, one can readily distinguish those which are *independent* in character and do not show a special tendency toward some other chord (that is, consonant chords), from those which show a decided tendency toward other chords, and are, therefore, *dependent* in character (that is, dissonant chords).

To the former kind belong most of the Triads; to the latter kind, the Chords of the Seventh. These two kinds of chords are the so-called Fundamental Harmonies, from which all other chords are derived.

CHAPTER I

Triads of the Major Scale

A triad is formed by combining three different tones. The lowest of these is called the Fundamental, or Root, to which are added its Third and Fifth; *e.g.*,

1 

These three triads are erected on *c*, *g* and *a*, respectively; but those on *c* and *g* are formed by adding to the root a *major* Third and a perfect

Fifth, while the triad on *a* has a *minor* Third and perfect Fifth. This shows that triads may be composed of different intervals.

A triad with *major* Third and *perfect* Fifth is called a

major triad,

and a triad with *minor* Third and *perfect* Fifth is called a

minor triad.

NOTE. — The explanation of other kinds of triads must be deferred till later.

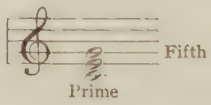
Just as the diatonic scale contains the material of the key, and forms the foundation of the melodic lines, we shall see that the triads based on the several degrees of the scale form the essential part of the harmonic material of a melodic line.

NATURAL CONNECTION OF THE TRIADS IN A KEY

The triad on the first degree of a scale is the most important one, and establishes the key; but there are others — those most closely connected with it — which are needed to define and confirm its position.

In the simple form of the triad, consisting of two Thirds one above the other, the Prime is the root (fundamental), and the Fifth is the highest tone — the point, as it were.

2

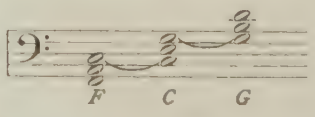


NOTE. — Any further addition of an interval would either give the chord another form, or double one of the tones already present.

The triad most closely connected with this one must, as an independent triad, lie outside of this tone-group, but at the same time support itself on one of its tones — grow out of it, so to speak. This supporting tone must be one of the extremes (end-tones) of the first triad, that is, either *c* or *g*. Consequently, *g*, which is here the Fifth, will become the root of the next triad in the chain; while *c* will become the Fifth (the point) of the triad below, whose root will be *f*.

The way these three chords are connected can best be shown as follows:

3



Concerning these three triads so closely linked together, observe, to begin with, that all the tones of the scale are contained in them; that they are the distinctive harmonies of the key, and therefore are —and must be — most frequently used in practice when the key itself is to be clearly and unmistakably presented.

Being so important, they have received distinctive names. The chord first given, based on the first degree of the scale, is called

The Tonic Triad;

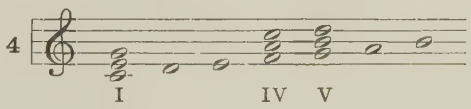
the second chord, on the fifth degree,

The Dominant Triad;

the third chord, on the fourth degree,

The Subdominant Triad.

Writing these chords in their places in the scale, they appear, without exhibiting their intimate connection, like this:



and all prove to be major triads.

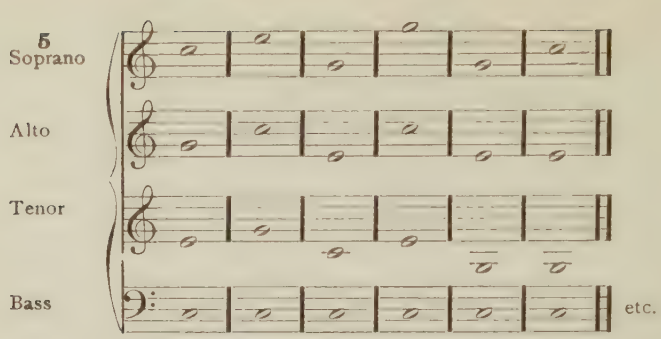
How to Employ the Chords Shown Above

For the explanation of, and practical exercises with, these three chords, and also in our later work, we shall use what is called *four-part harmony.*

Note. — Although the theoretical interconnection of the chords can, in many ways, be well exhibited in three-part writing, it would cause delay in reaching our practical aim, and shall therefore be left for incidental demonstration. Four-part writing will always maintain its importance as the foundation of all species of composition.

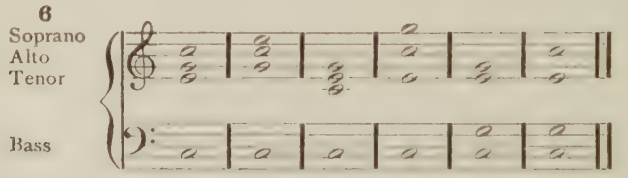
However, we do not consider each harmony as a mere mass, as they often appear in compositions for the piano, but distribute the tones of which it is formed among *four separate parts.*

The highest part is called the Soprano; the lowest, the Bass; these two are known as the "outer" parts. The part lying next below the Soprano is called the Alto; that next above the Bass, the Tenor; these two are known as the "inner" parts.

Written "in score" the parts are arranged, and the triad exhibited, something like this:

Formerly there were in use, for the three higher parts, special clefs which, to a certain extent, were better adapted to the compass of the voices than the violin-clef we have employed. Of these we shall speak later. In their stead, the violin-clef has come into common usage; but as this clef does not fit the pitch of the tenor, we always write the tenor-part an octave higher than it really sounds.

For our first exercises we shall not use a separate staff for each part, but only two staves (as in writing for the piano), as this makes the exercises easier to read.

Written on two staves, the separate parts of No. 5 would look this way:



When chords are connected one with the other, these different parts have to be considered in a twofold aspect; (1) with reference to the progression (movement) of each part by itself (that is, its individual melodic progression or *leading*); (2) in its relation to the other parts (its harmonic progression). The progressions, in both these relations, must be pure and correct.

The fulfillment of these two conditions is termed pure part-leading.

Such purity of the harmony and its progression is attained by seeking out and practising what is natural in and according to the laws of the progression of chords.

From the observance of this rule arises what is called *pure harmony*, or the "strict style" of writing, which is based on rules and laws drawn from the nature of music itself, the observance of which will afford the

surest foundation for a future free employment of the materials for composition. By exercises in the strict style the judgment is sharpened, the sense for what is true and correct formed, and the taste refined.

NOTE. — Inasmuch as every composition should make its effect by means of a correct use of all available resources and the purity (here synonymous with "natural expression") resulting therefrom, the term "pure harmony" in a general sense would require no further explanation, as being self-explanatory. In a narrower sense, however, "pure harmony" means something else, which is still better and more precisely designated by the equivalent term "strict harmony," "strict style"; this latter being contrasted with the "free style." On the other hand, no contrast to the "pure" style (in the strict sense of the word), such as an "impure" style, can be assumed; for, however frequently this latter may in reality occur, the right name for it would be "incorrect," or "false," whereas the "free" style might well be essentially founded on the lawfulness of pure harmony.

As indicated above, by "pure harmony" in the narrower sense is meant *a style which permits, in the natural development of all combinations of tones, the fewest deviations from the strict rule; allowing only such as do not affect essentials, fundamentals, and for which good reasons can be given.*

While the above gives a general idea of pure harmony, its bounds are still not precisely determined; and just this is a point which gives the beginner all the more difficulty, because these bounds are very differently determined by the theorists themselves. This difficulty has occasioned many of the latter, particularly some of the more recent ones, wholly to avoid speaking of "pure harmony," of "strict style," and to begin immediately with composition, leaving instruction in the laws of harmony to be an incidental feature. Here we shall not investigate whether this yielding to youthful impatience, with its dislike for abstract teachings, — this tendency to immature production before elementary talent has developed into creative power, — can bring into existence anything really mature.

All those who agree with the views set forth in this book and follow them in their studies, and also all those who are required to go through a strict course, may rest assured that their freedom for future production is in no wise curtailed by present restrictions, but will develop the more fully and vigorously because rooted in the soil of natural law. True mastership has ever shown itself most effective within limitations; and contrariwise, the most unfettered conceits are not infrequently a proof of mental morbidity and weakness. On the other hand, the student is not justified, where his task involves the application of the rules, in making use of any exceptions to these same rules, although such exceptions may be found in works by eminent masters; he should not try to *write compositions* when the point is to *work out exercises* with theoretical precision.

The employment of our three principal chords in four-part writing will give rise to remarks and observations, following which certain basic facts and rules will be established.

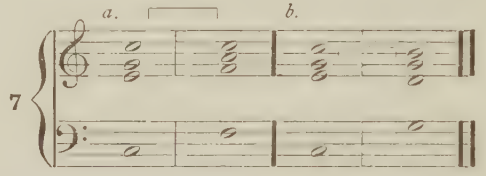
As a triad has but *three* tones, one of them has to be doubled in *four*-part harmony.

Any tone of the triad may be doubled; in most cases, however, the *root* will be best adapted for doubling, and less frequently the Fifth and

Third. In some cases brought up further on, the Third is not to be doubled at all. The doubling of any tone must result from a good and correct leading of the parts.

When one triad is to be connected with (progress into) another, observe the following rule:

(1) Any tone common to (occurring in) both chords *is to be retained in the same part.* For example:



In 7a the tone *c* is common to both chords; the soprano-part, which contains the first *c*, still retains it as the Fifth of the next chord. Similarly, in 7b, the connection of the chords is effected by the tone *g* in the alto-part.

The other parts progress (move on) to the tones lying nearest them; thus, in 7a, the alto goes from *g* to *a*, the tenor from *e* to *f*, etc.

(2) When the two chords have no tone in common, the parts are led independently in such a manner that *no two of them progress in parallel Fifths or Octaves.*

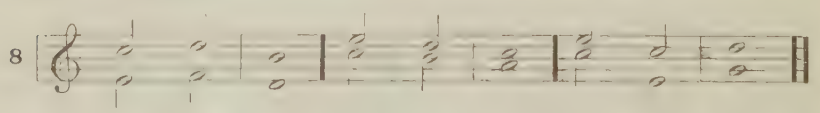
Before explaining these incorrect progressions, some remarks on the relative movement of the parts will be necessary.

Relative Movement of the Parts

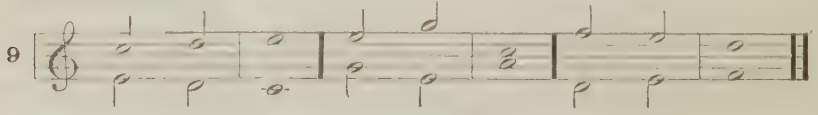
One part may progress with another in

Parallel motion (*motus rectus*),
Contrary motion (*motus contrarius*), or
Oblique motion (*motus obliquus*).

Parallel motion results, when both parts progress together either upward or downward.

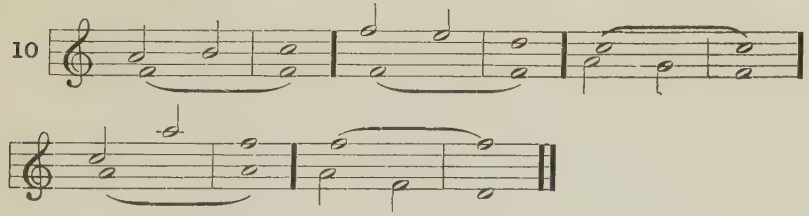


Contrary motion results, when one part progresses upward and the other downward.



Oblique motion results, when one part remains on the same tone while the other progresses.

10



In chord-progressions any two, or all three, of these modes of motion may occur simultaneously. For instance, in No. **7b**, we have parallel motion between soprano and tenor; contrary motion of soprano and tenor against the bass; and oblique motion between the alto and the other parts.

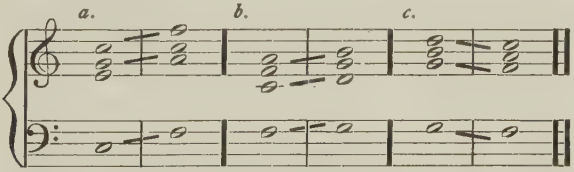
The above-mentioned *incorrect* part-progression in *parallel Octaves* or *Fifths* can appear only in *parallel* motion, as when two parts move by a step or leap like this:

11

This progression is wrong between any two parts.

The following harmonic progressions exhibit both these mistakes.

12

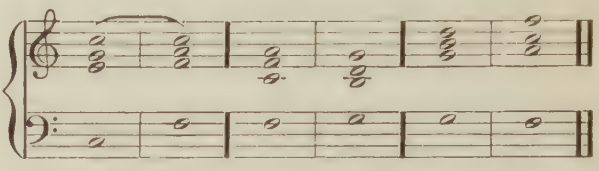


In **12a** a parallel octave-leap occurs between soprano and bass; in **12b**, octave-step between alto and bass, and the same in **12c** between tenor and bass. Parallel Fifths occur between alto and bass in **12a**, between tenor and bass in **12b**, and in **12c** both between soprano and tenor, and soprano and bass.

The mechanical device for avoiding these and similar incorrect progressions is, in the above cases, *the employment of contrary and oblique motion* in the parts; that is, any part which already forms an octave or a Fifth with some other part in the first chord, must either *progress in contrary motion* to this other part, or (when the next chord contains the same tone) *not move* away. The other parts will then go over to the tones lying nearest them in the new harmony.

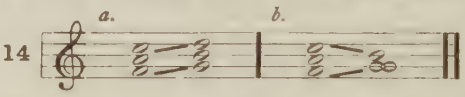
Thus, in 12a, we should employ oblique motion against one part, and in 12b and 12c contrary motion of the three higher parts against the bass.

13



NOTE. — The prohibition of parallel octaves (and equally of parallel unisons) is easily accounted for by the necessity for the independent movement of the parts. It is harder to find the reason for prohibiting parallel Fifths, however certain one may feel of its necessity; and great pains have always been taken to explain it plainly and precisely. Test the following opinion on this head.

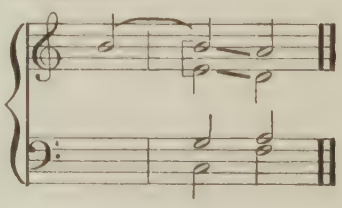
Assuming that every chord-form represents a complete Whole, which, in whatever shape or position it may appear, is practically enclosed as within a circle between the bounds of Root and Fifth (here the Seventh, as a supplementary member, cannot be taken into account), — and assuming that harmonic connections can be effected only by letting the one chord enter into and, as it were, blend with the other, — it is evident that when two chords within their boundaries are set side by side, Fifth following Fifth, they do not blend, or resolve one into the other, but seem quite unrelated. This will be readily seen on comparing the two following progressions:

14

Properly speaking, however, the Sevenths form no new chords, in so far as they render (by preparation) the connection with preceding chords firmer and closer, thus merely serving to determine more definitely the relations between two chords, and to render the harmonic connections surer and more intimate.

Now, wherever the *perfect Fifth* appears, it will assume its character as a *boundary;* and whether the other members of the chord — we might call them the "contents" of the Fifth — or a supplementary member like the Seventh may lie above it or below it, the unpleasantness in the succession of *two perfect Fifths* will invariably be found in *the lack of connection,* in the isolation, of the intervals.

Having spoken only of the Fifths in triads, we will add, that in the case of perfect Fifths formed by adding a Seventh (although the rule for its preparation is a partial prevention of parallel Fifths), the progression of such a Seventh forming a perfect Fifth with some other part into a following perfect Fifth will sound just as badly, with the same lack of connection; because the fault lies in the entrance of the *second* Fifth without connection. For instance:

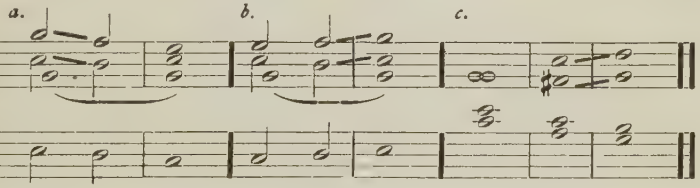
15



Further, with regard to the diminished Fifth, which can appear in connection with the perfect Fifth (as in the dominant seventh-chord), the opinion advanced above completely justifies its entrance parallel with the perfect Fifth; for, when it *follows* the perfect Fifth, its character as a connecting-link is felt; whereas, *before* the perfect Fifth, aside from the other laws of its progression, the latter immediately oversteps a well-defined boundary.

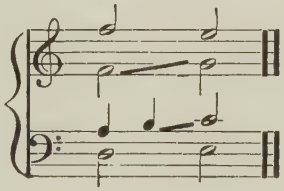
Compare the following passages:

16



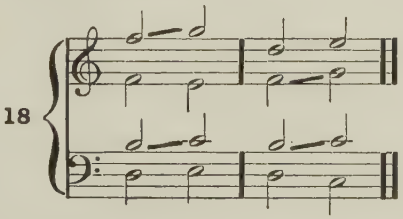
Although progressions like the following are not seldom found in compositions in rather strict style:

17



it may be assumed that the doubling of the diminished Fifth (the *f*) necessitates a dual progression of that tone. True, the alto might make a somewhat forced progression to *c;* but then the *g* of the next chord would be lost. And the successive Fifths are here not especially prominent, being between inner parts. However, the following progressions cannot be called pure:

18



partly because they are too noticeable in the highest part, and partly because the previous condition of a dual progression is wanting. Passages like No. **16c**, whose value is doubtful, occur not infrequently.

This also explains why parallel Fifths arising from passing-notes are often not so disagreeable as those just mentioned. On this account many theorists consider them quite correct; but this cannot be unreservedly admitted, as many of these progressions are founded on others which are incorrect, and it cannot be denied that their unpleasant effect becomes apparent in widely dispersed position of the parts and with sufficient prolongation.

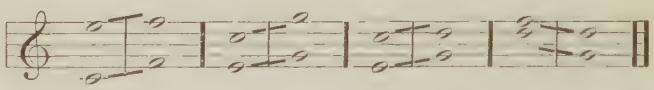
This is not the place to treat these matters in fuller detail; and a great deal might be said on various points — for instance, on the progression of the Fifth in the augmented chord of the Fifth and Sixth — which would lead too far. In our practical exercises we shall meet with details which will bring us back to this matter.

Should the meaning of the foregoing discussion seem obscure to the mere beginner, it will soon become clear to him in the light of advancing acquirements and practical work, and after the needful reviews of the course covering the system of chords.

The incorrect part-progressions hitherto mentioned are termed "open" (parallel) Fifths and octaves.

These progressions are called "covered" when two parts progress in parallel motion to the interval of a Fifth or octave from some other interval.

19



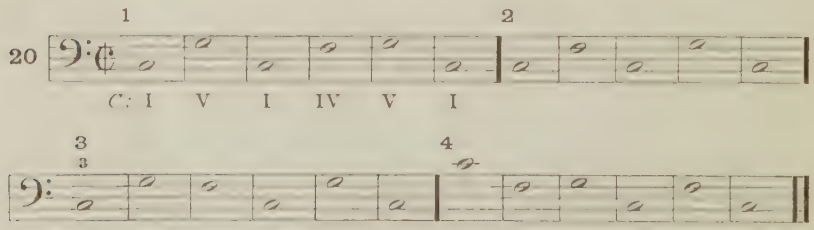
Open parallel Fifths and octaves are not to be permitted in our harmonic progressions; concerning the permissibility of *covered* Fifths and octaves, more shall be said later (in Chap. XVII); for the present oral directions must suffice, since there will be little opportunity to make mistakes of this kind in any case, if the exercises are worked out intelligently.

NOTE. — When working out the first exercises, the beginner will do well to leave covered Fifths and octaves quite out of consideration; for if they are too anxiously avoided the primary principles of chord-connection will not seldom be violated, and other — and far worse — mistakes made. In future we shall often have to refer to this point, and shall go into further details when maturer insight has been reached.

EXERCISES

Our next task shall be to connect the three principal triads musically, observing the rules previously laid down.

For this purpose we shall take the following bass progressions:

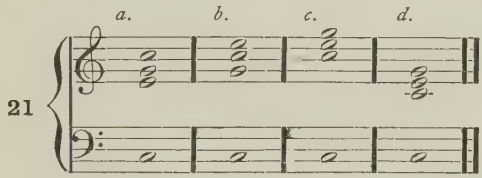
20

NOTE. — These and all the following exercises show the manner in which our practical work is to be done. The exercises are to be continued until the matter in hand is thoroughly understood, and all rules heretofore given properly applied.

The disposition of the three higher parts which are to be added in the first chord, will call for important observations.

In Example 5 we have already seen that the disposition of the parts in a chord may differ greatly. This disposition of the several parts is called the Position of the chord.

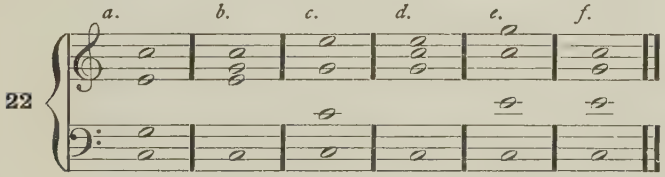
Close and Open Position

A chord is in *Close Position* when the three higher parts lie so close together that neither the soprano nor the tenor, if inverted by an octave, would be set between the other two, and even if the bass be distant.



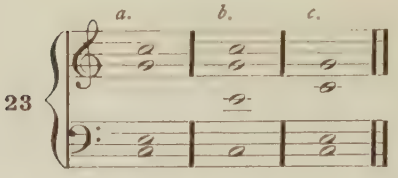
The first grouping of the chord (**a**) is changed (**b**) so that the former tenor-note *e* is set an octave higher in the soprano, and again (**c**) by setting *g* in the soprano, above *e;* while finally (**d**) the soprano-note *c* is set an octave lower. In all these transformations the disposition of the chord-notes is changed, but not the close position.

It is different when the chord appears in *Open* (or *Dispersed*) position; now either the soprano can be set between alto and tenor, or the tenor between alto and soprano; from doing this, close position results.



22a shows the chord in open position; **b** in close position, by transposing *g* between alto and soprano; similarly at **c** and **d**. At **f** the soprano-note *g* in the preceding chord is set an octave lower, between alto and tenor.

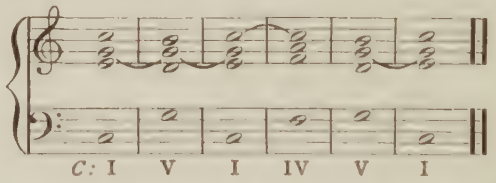
The following disposition of the notes (No. **23a**) would not be open position in the fullest sense, because transposition of the tenor (as at **b**) would not affect the relations of the highest parts; only by transposing the soprano (as at **c**) do we obtain the complete form of open position.

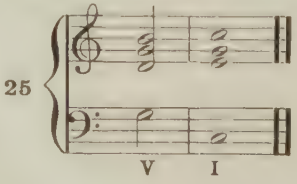
23

Although the chord seems fuller in open position, it should not always be employed, and for our first exercises is not easy enough to read; to begin with, therefore, we shall work them out in close position.

NOTE. — *It is always best to work out the exercises at first in close position*, not employing open position until we reach the exercises in Parts II and III, where the need of its use will become self-evident. For the beginner, work in open position presents occasional difficulties, to overcome which cannot be our immediate object, and which are therefore better avoided.

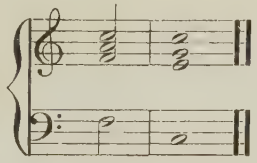
The disposition of the notes in the successive chords varies according to the necessary progression of the parts. When the form of the first chord is settled, the notes of the following chords cannot be written down haphazard, but must be governed by the rules for the connection of the chords already given on pp. 13 and 14.

The connection of the chords, and leading of the parts, in No. 20, first exercise, may be exhibited thus:

24

The natural relation of the chords to each other in this simple example will be clearly understood, by carefully observing their interconnection as indicated by the slurs. In the last two chords, more especially, does the close connection, the effect of mutual completion, appear plainly. The feeling of "homecoming," of repose and satisfaction, which results from this chord-connection, makes it peculiarly adapted to form the "close." This form of close by the progression of the dominant chord to the tonic triad, is called (when the tonic triad falls on the rhythmic accent, the *strong beat*) the Authentic Close.

25

Another form of close, effected by the subdominant triad (See No. **20**, fourth exercise), is called the Plagal Close.

26



IV I

Details will be given later concerning these and other forms of the close.

In order to become familiar with the progression of the chords which results when the bass progresses by a step (as *F–G* in No. **24**), it will be a good plan to write out the succession IV–V and V–IV in different positions and keys.

Triads on the Other Degrees of the Major Scale

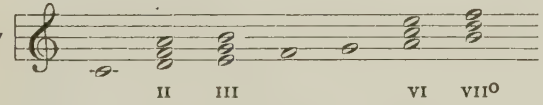
While all the triads on the other degrees of the scale will belong to one and the same key, they will not so definitely determine the key as, for instance, the chord-succession V–I.

These other triads are called, in contradistinction to the Principal Triads,

Secondary Triads.

They are situated on the second, third, sixth and seventh degrees of the scale.

27



II III VI VII°

The triads on the second, third, and sixth degrees, are minor triads, because they have a minor Third and a perfect Fifth.

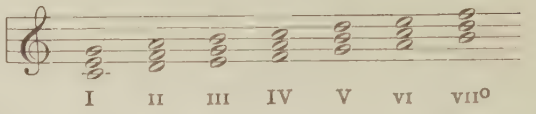
The triad on the seventh degree is essentially different from the rest, because, besides a minor Third, it has a *diminished* Fifth; on this account it is called the

Diminished Triad.

To indicate the minor triads we shall use, as an easy distinguishing mark, small Roman numerals to number the degrees on which the triads are situated; the diminished triad is further distinguished by a ° (as above, VII°). This method of numbering was introduced by the theorist G. Weber.

Below is a view of all the triads of the major scale:

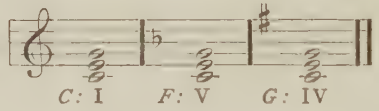
28



NOTE. — The beginner must take care not to get the idea that all these chords, wherever they occur, are "tonic" triads; such a misunderstanding makes it much harder to gain an insight into harmonic connections. As long as *C* major is the ruling key, any triads which may occur on *G*, *F*, *d*, etc., are simply triads on the several degrees of *C* major and belonging to that key; hence, we cannot speak of "the *G*-major triad," "the *F*-major triad," and the like, so long as the said keys do not appear as *independent* keys.

Hence it comes, that the chords mean different things in different situations; make a mental note of this fact. Any triad may belong to more than one key. The *C*-major triad may be:

29



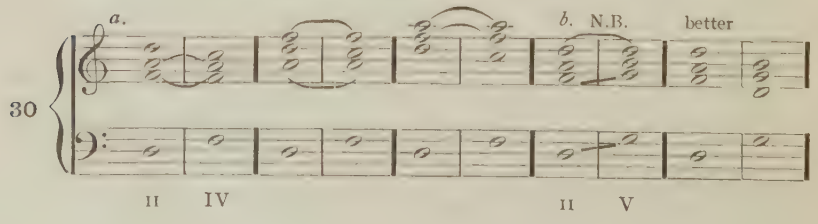
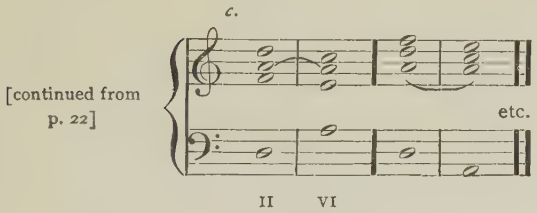
So when we mention this chord familiarly as "the chord of *C* major," this name would be correct only in the first instance, where the *C*-major triad occupies the *first* degree, and incorrect in the other two cases.

APPLICATION

For connecting these chords, either among themselves or with the principal chords, no new rule is needed at present; but several new matters will be brought to light.

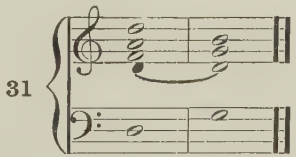
The bass may progress either *stepwise* or *by a leap* (*skip*). In the former case connecting-tones (tones common to the two successive chords) will always be present; in the latter case the parts must be led in contrary motion (according to the rule given on p. 14), so as to bring out the inner connection of the chords.

A. THE BASS PROGRESSES BY A LEAP

30

As the leaps of the bass from the second degree are treated in these examples, they may be treated when starting on any other degree; that is, *tones common to successive chords will remain held in the same parts.*

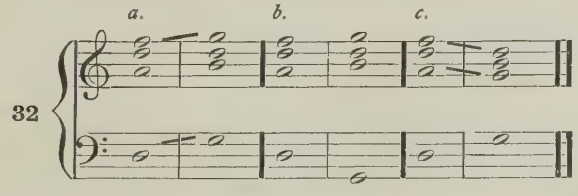
To this rule, however, there are numerous exceptions.

At N.B. in No. 30 there is formed, according to the above rule, a progression of parts containing a covered octave between tenor and bass, which is unquestionably improved by the next progression. Even though the local connection of tones is wanting in the latter example, the inner connection is preserved; for the soprano note *d* in the first chord may readily be imagined as doubled in the lower octave, and this instantly makes the connection visible:



NOTE. — Why we should imagine just *this* tone to be doubled, instead of taking one of the others, comes from the fact that it is the *fundamental note*, the tone which establishes the entire chord. Again, the interval of two octaves between bass and soprano naturally leads to the doubling of the intermediate octave-tone.

The unpleasant effect of the above-mentioned covered octave is due to the progression of the higher part by a *whole* tone, and is still worse when contained in the two outer parts, as in No. 32a:

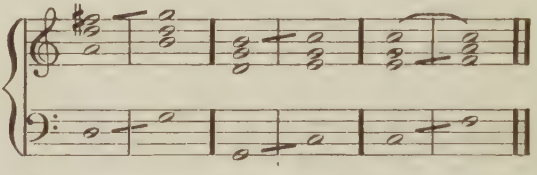


The part-leading at 32b can be improved by contrary motion in the bass, and similarly by the contrary motion in 32c, though in this latter case there is a covered Fifth between soprano and tenor. (See Note to No. 36.)

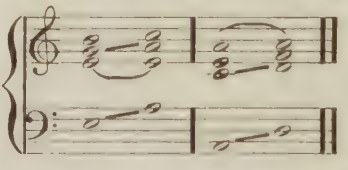
NOTE. — In the examples given above we do not say that absolute mistakes are made. Where we are at liberty to lead the parts as we please, much may be avoided which is unavoidable under other conditions — as, for instance, harmonizing a *cantus firmus*, developing a motive, or from other reasons of importance in composition. Here the improvement was made only from an absolutely theoretical standpoint. Respecting the covered Fifths in 32c, more follows at No. 36.

The unpleasant effect of the above covered octaves immediately disappears, *when the higher part progresses by a semitone:*

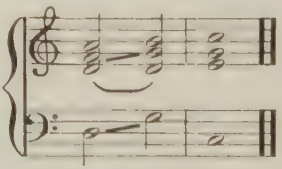
33



This shows that covered octaves are quite allowable when the higher part progresses upward by a *semitone* only, that is, where we have to do with the connection of a major triad with a minor triad, or with another major triad. In such cases the covered octave becomes a necessity, and the endeavor to avoid it would often cause a bad leading of the parts.— Hence, greater caution is necessary, as we have seen, when the higher part progresses upward by a *whole* tone. Where the connection of two minor triads is in question, as in the following examples:

34

the covered octave would seem to be decidedly admissible, at least in most cases. But where a minor triad is to be connected with a major triad, as in No. 30 at N.B., it will be better to avoid the covered octave by means of contrary motion in the three higher parts. We should, therefore, be specially on our guard when the triads on the second and fifth degrees are to be connected; though even in this case exceptions are found. Thus, in the following example:

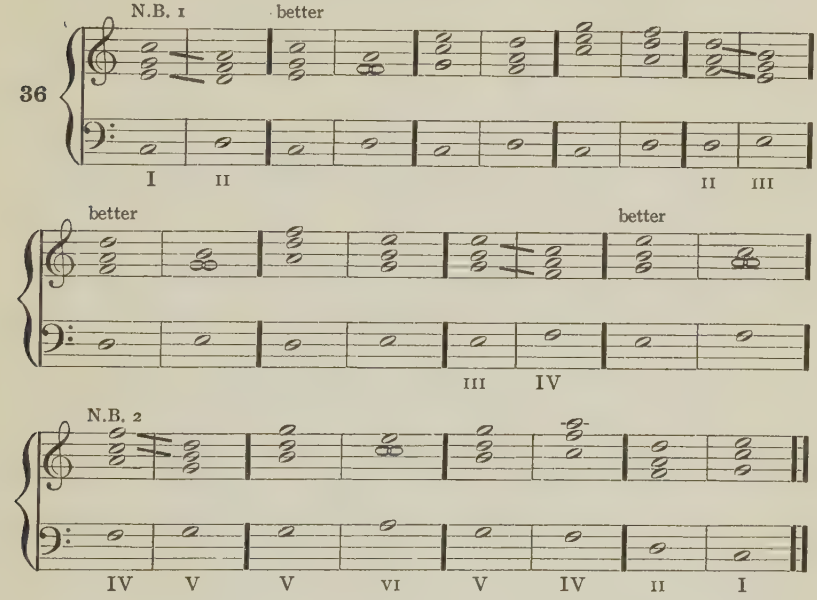
35



the covered octave between alto and bass is wholly allowable, because it helps to bring about a good close.

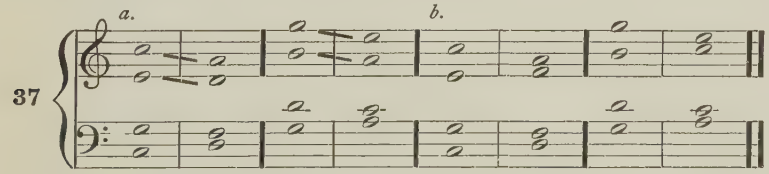
B. The Bass Progresses Stepwise

In this case contrary motion is always to be employed; for instance:



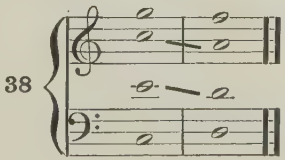
Remarks on these Chord-connections

In the progression at N.B. 1 and the similar ones following, it is best to double the Third in the second chord so as to avoid covered Fifths. Their effect is still worse with chords in open position:



The progressions marked **b** are preferable.

If these covered Fifths occur in the inner parts, they are admissible under certain circumstances, not being so prominent.

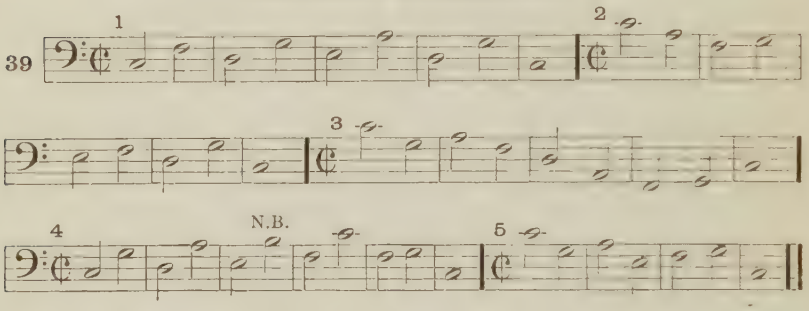


At N.B. 2 in No. 36 the Third of the second chord must not be doubled, because the doubling of the seventh degree (the tone *b* of the second chord in No. 36) is regularly to be avoided. (See p. 27.)

Concerning the treatment of this tone, which is called the "leading-tone," more will be said in connection with the following exercises.

EXERCISES TO BE WORKED OUT

39



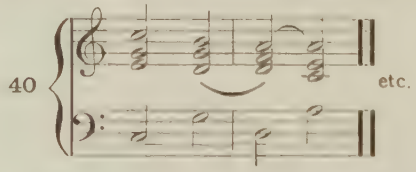
The fourth exercise gives occasion for a few remarks.

Here the progression of the bass proceeds, in the first four measures, in a regular and consistent manner. Such a regularly repeated harmonic or melodic progression is termed a Sequence.

This regularly measured progression of the bass calls for a similar regular progression of the other parts.

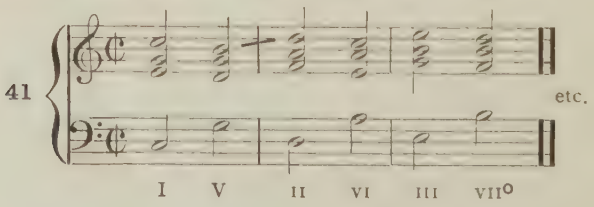
Were we to work out this exercise according to our earlier rules for chord-connection, that is, by retaining common tones in the same part:

40



we could not attain the proposed end; instead, the parts must progress in such a way that the first chord in the second measure shall enter in the same form that the first chord in the first measure assumed; and so the connecting-tone *d* does not remain in the same part.

41



In the first exercise, too, the covered octaves already alluded to may be allowed for the sake of the sequence, in case they do not occur between the outer parts.

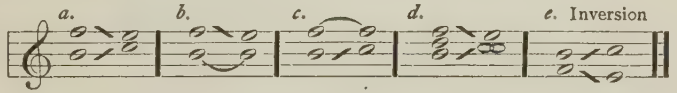
In the third measure of the fourth exercise we meet with a chord not yet employed,

The Diminished Triad.

It stands on the seventh degree of the major scale, and is not so independent as the triads hitherto discussed, because it has a tendency to a distinct progression, owing to the dissonance of its diminished Fifth.

The natural progression of the diminished intervals may be stated, in general terms, as follows: Either both tones approach each other by a step (**a**), or only the higher or the lower tone progresses (**b** and **c**) — a kind of part-progression which can be elucidated only by actual chord-connections.

42



In **42d** the Third following the diminished triad exhibits the triad on the first degree in an incomplete form (the Fifth omitted).

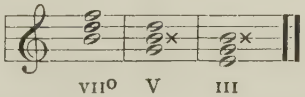
In view of the relations of the intervals on inversion (pp. 6, 7), through which a diminished Fifth becomes an augmented Fourth, the progression of this latter interval must proceed in precisely the opposite fashion. (See **42e**.)

The root on which the diminished triad is erected is called the

Leading-tone.

It is also found in the dominant triad as the Third, and in the triad on the third degree as the Fifth.

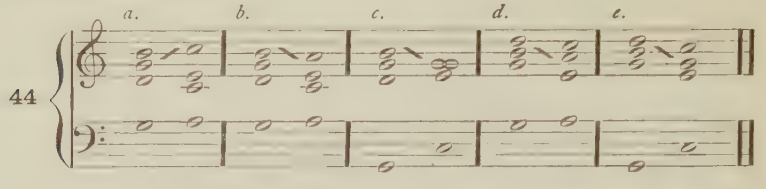
43



The *leading-tone being*, as an harmonic interval, *exceedingly prominent*, it *should not be doubled* in simple four-part writing.

Its progression to the semitone above is also to be effected, when the chord next-following contains that tone.

This tendency to progression upward by a semitone is due to the melodic character of the leading-tone, induced by its situation a semitone below the keynote. It is especially noticeable in the case of the domi-

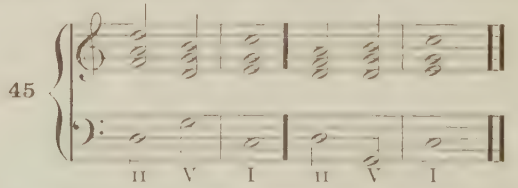
nant triad when the leading-tone is in the highest part; thus **44a** has a more satisfying effect than **b** or **c**.

This upward striving is less apparent in the inner parts (as at **44d**). Of least practical use are leaps in the highest part (as at **44c**) in the given chord-connection, although a particular melody-line might justify even this leading. Contrariwise, leaps in the inner parts (as at **44e**) should be employed *when the bass is led in contrary motion.* (Compare pp. 44 and 45.)

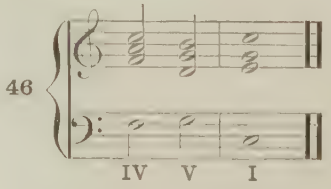
In Example **41**, measure 3, the doubling and a progression of the leading-tone *contrary to rule* may be found. Both of these resulted from the *sequence* on which the example is built, which allows no change either in the position or the progression of the chords.

More Extended Forms of the Close

The close formed with the dominant chord (authentic close), noted on p. 20, appears in our last examples in a still stronger combination.

While the natural relation of the dominant chord to the tonic triad makes these two chords suitable for the formation of a close, we find in these examples a still further preparation of the close by the aid of the triad on the second degree. This triad bears the same relation to the dominant chord, as this latter to the tonic triad. For instance:



Besides the triad on the second degree, the subdominant triad is also suitable for forming a close:

The "closing formulas" (*cadences*) resulting from these chord-connections will assume still more strongly defined forms when the further employment of the chords has been explained. (Compare Chap. XXVI.)

CHAPTER II

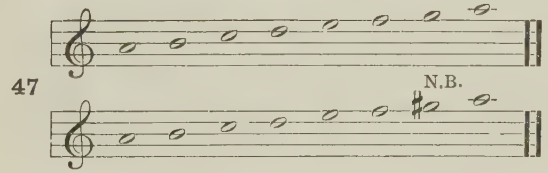
Triads of the Minor Scale

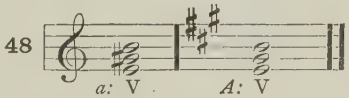
A. The Principal Triads

The principal triads of the major scale we found to be those on the *first*, *fourth* and *fifth* degrees. On these same degrees we also find the principal triads of the minor scale.

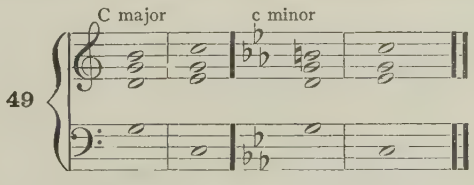
However, the chromatic alteration of one tone in the minor scale is made requisite by the relation of the dominant triad to the tonic chord, a relation shown most plainly by the forms of the close already given.

The seventh degree in minor, which according to the signature of the minor key is always a *whole* tone distant from the eighth degree, is chromatically raised by a semitone to give it the character of a leading-tone:

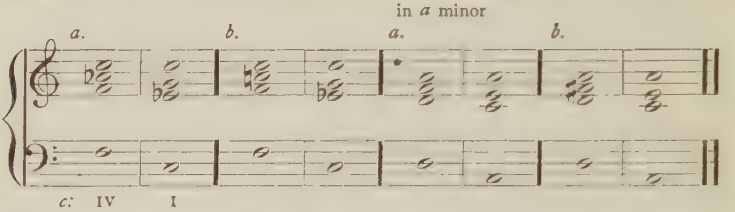


By this means the form of the dominant triad in minor is made exactly the same as in major, namely:

or, briefly expressed:

THE DOMINANT TRIAD, IN MAJOR AND MINOR, IS ALWAYS A MAJOR TRIAD.

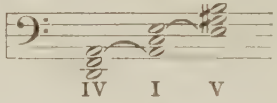
This is clearly shown by comparing the authentic close in both modes:

But the sixth degree in minor is incapable (*in an harmonic sense*) of undergoing a chromatic alteration through raising it by a chromatic semitone, such as is often necessary in *melodic* progression; this is proved by the plagal close No. **50a**, which is quite unsupposable as at **b**.

50



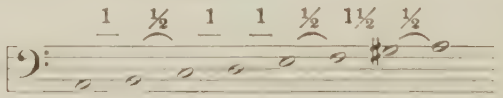
In line with previous explanations, the three principal triads in minor may be presented in their most natural relation as below:

51



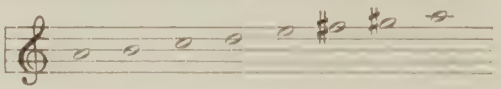
The minor scale, therefore, viewed as a foundation for the erection of harmonies, will have the following form:

52



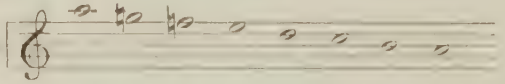
Note. — All other forms of the minor scale, like this (ascending):

53



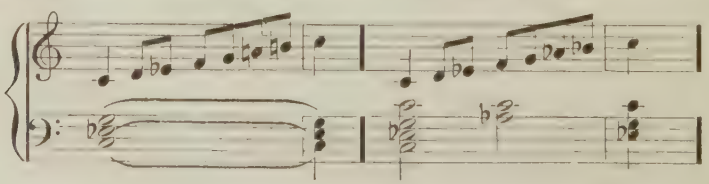
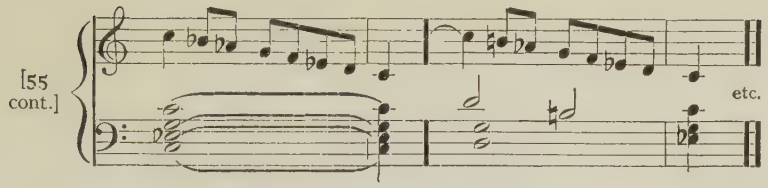
or this (descending):

54



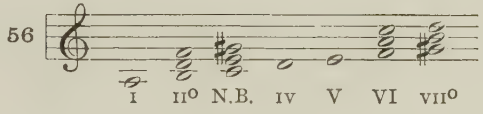
depend on melodic conditions, which do not permit the step of an *augmented Second* between the sixth and seventh degrees that is shown in No. **52**.

These scale-forms exert no influence on the formation of chords considered in and by itself; on the other hand, the harmonic substructure has a very real influence on the shaping of the minor scale itself, as the following examples show.

55

In the last case the descending scale even contains the step of an augmented Second *b*–*a*♭, a melodic interval which we shall carefully avoid in our future work. It occurs here because *b* is an essential member of the chord, and because *a* (instead of *a*♭) would violate the minor character of the run, which is amply secured in the ascending scale of the first example by the minor Third, *e*♭.

B. The Secondary Triads in Minor

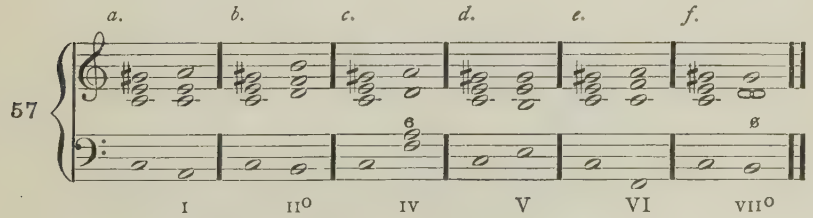
The form of the harmonic minor scale being established, the secondary triads will be the following:



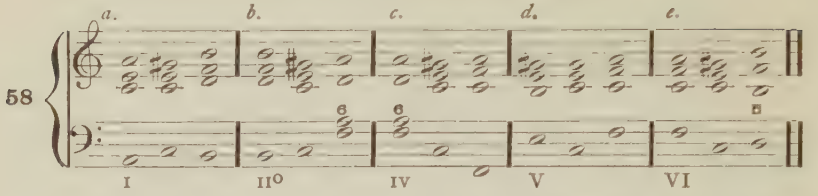
On the *second* degree we find a *diminished* triad (as before on the seventh degree in major), and another diminished triad on the *seventh* degree. The triad on the *sixth* degree is *major*.

A new form of triad is found on the *third* degree, having a major Third and augmented Fifth; for which reason it is called

The Augmented Triad.

On account of the constrained or forced effect in the connection of this chord with other chords of the same key, it *seldom* occurs as the *fundamental harmony of the third degree* in minor. The following examples may serve to prove this.

Those marked **c** and **e** are probably the most useful in practice.

The introduction of this chord is still more difficult:



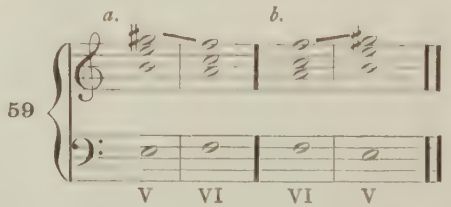
Its entrance sounds best when the augmented Fifth is *prepared*, that is, when it is already present in the same part as a member of the preceding chord (as at **d**).

NOTE. — The chord on the third degree, both in major and in minor, has something strange in its character. Hence, it is very difficult to combine either of these chords with other harmonies in a natural and effective manner (even in the case of the simple minor triad on the third degree in major), and so they rarely occur.

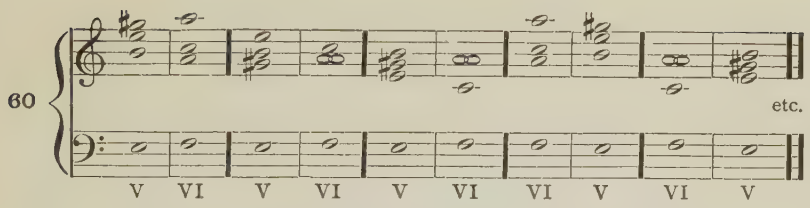
Most of the practically useful chord-connections shown above will occur in other combinations in which the augmented triad will not be recognized as the triad on the *third degree in minor*. The augmented triad so freely employed in modern music is one of those chromatically altered harmonies to be explained later under the head of Altered Chords (Chap. X).

APPLICATION

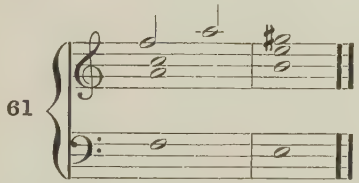
The principles of chord-connection and part-progression elucidated in the foregoing pages are now to be applied practically. More especially, in connecting the fundamental triads in minor, we must heed what has been said about the *progression* of the leading-tone. The step of an augmented Second between the sixth and seventh degrees in minor must be avoided as an *unmelodic* step, either ascending or descending, where both tones forming the augmented Second belong to *different harmonies*. For example:



Consequently, when connecting the chords on the fifth and sixth degrees, which very often occurs, the leading-tone must always progress upward, which will result in doubling the Third of the triad on the sixth degree.

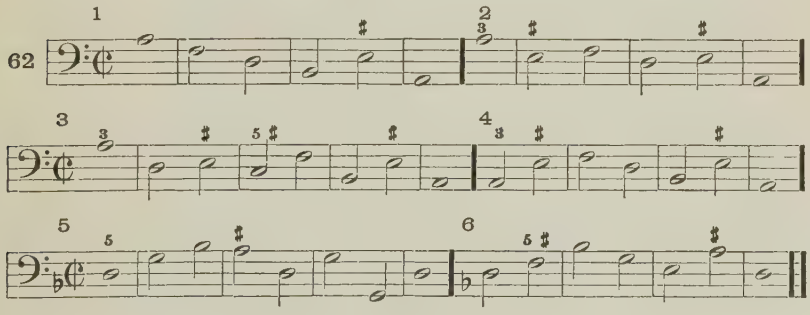


Thus it would be impossible to give a correct solution of No. **59b** without using some intermediate tone, like this:



In practice, deviations from this rule are made in special cases. But the student should take particular pains to learn the part-leading as it is given above, and the more so because we must not overlook the fact, that every deviation from the rules, in practice, is and ought to be only an exception for which good and sufficient reason can be given; whereas, in innumerable other cases, it can be shown that the rule is observed.

EXERCISES IN CONNECTING THE TRIADS IN MINOR



Remarks on the Exercises

A chromatic sign above a bass note *without a figure*, as in Example 1, measure 3, always refers to the *Third* of the bass. This raising of the Third in the dominant chord, which occurs very often in minor, is the raising of the leading-tone discussed on p. 29.

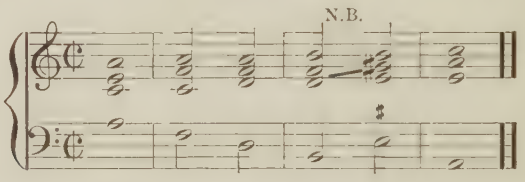
The triad, as a rule, is not marked in thorough-bass figuring when the bass has the root; if there are special reasons, it may be indicated by 3, or 5, or 8, or $\frac{5}{3}$, or in full by $\frac{8}{3}$.

One reason for marking it by a 5 is found in Examples 3 and 6, where the attempt is made to introduce the triad on the third degree in minor; here it is necessary to indicate that the Fifth is raised, this Fifth also being the seventh degree of the minor scale.

When a 3 or 5 stands over the *first note* of an exercise, it determines the disposition of the chord-tones. (See Remarks on the next Exercises, p. 39.)

The working out of an exercise will show the correctness of the precepts already laid down. To this end we choose Exercise 1.

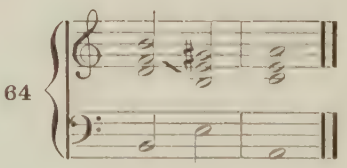
63



Here the first principle of chord-connection — by holding over common tones in the same part — is observed throughout; and so it happens that the alto makes the incorrect step of an augmented Second (*f* to *g*♯) at N.B. in the third measure.

In order to avoid this mistake (see p. 32) we shall have to lead the alto from *f* to *e*, the soprano from *b* to *g*♯, and let the tenor leap from *d* to *b*, as below:

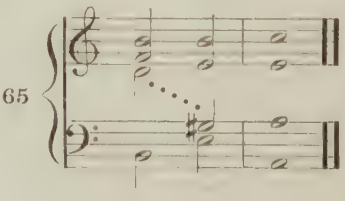
64



This chord-progression has already been explained (in No. 31); the connecting-tone is not retained in the same part.

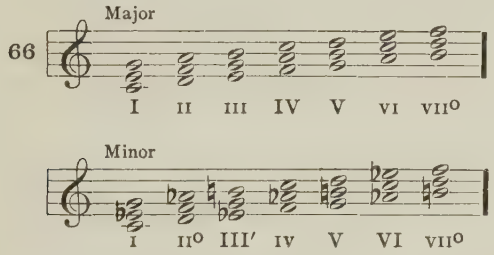
Another way to effect the progression would be to let the soprano retain *b*, while the tenor leaps downward from *d* to *g*♯, and the alto steps from *f* to *e;* whereby close position is forsaken, and this harmony and the next one appear in open position.

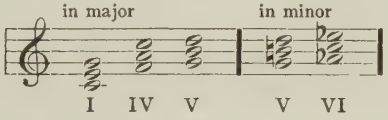
65

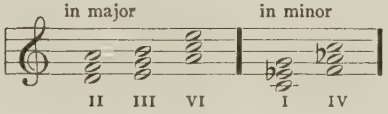


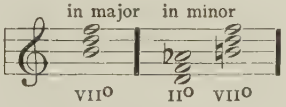
Further observations required by the difficulties in the leading of the parts where the chords on the fourth, fifth and sixth degrees in minor are concerned, will be left to practical demonstration in special cases.

Before proceeding to a further employment of the triads, a general view of the triads already discussed shall be given.

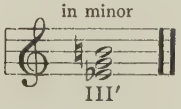
View of All Triads in the Major and Minor Scales

Major triads are found



Minor triads are found

Diminished triads

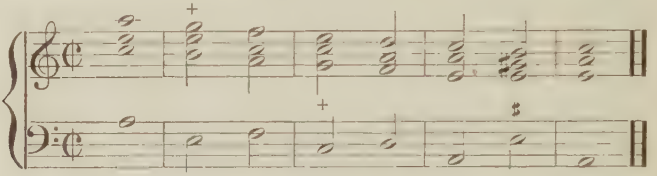


Augmented triad



NOTE. — But we must not lose sight of the fact, on which peculiar stress shall now be laid, that in minor a *dual* formation of the harmonies is possible. Our modern Minor Mode corresponds precisely to the ancient ecclesiastical Æolian Mode; the raising of the seventh degree (that is, the introduction of the leading-tone) was necessary for various reasons, and more especially because of the relations between the dominant and tonic triads. *Where imperative reasons are absent, the seventh degree need not be raised.* Then the triads on the third and seventh degrees may assume the form of *major triads*, and the triad on the fifth degree may be a *minor triad*. As to the triad on the seventh degree, it generally occurs as a diminished triad in connection with the tonic chord, though in connection with other triads it frequently

occurs as a major triad; again, it must not be overlooked that it many cases its entrance effects a modulation into the relative major key — *a* minor to *C* major (on this head compare "Modulation"). On the other hand, the triad on the third degree is usually employed as a *major triad*, that on the fifth degree frequently as a *minor triad*, as in the following example.

67

If *g*♯ were preferred throughout, we should have to change the melodic progression of the soprano; for that matter, the connection in meas. 3 could not be correctly effected with *g*♯. The reason that the triad on the third degree generally occurs as a major triad is that the augmented triad has a harsh effect, besides demanding a special, definite progression; it is, therefore, of small practical value, at least as the triad on the third degree in minor (compare comments on p. 31). At present (for evident reasons) we shall dispense with the employment of these possible alternate chord-forms in minor.

CHAPTER III

The Inversions of the Triads

CHORD OF THE SIXTH; CHORD OF THE FOURTH AND SIXTH

The employment of the triads, and in fact of all foundation chords, is not limited to the form in which the *root* is taken by the *bass;* either the *Third* or the *Fifth* of the chord may be set in the bass. This occasions transformations of the original chords, which are called

Inversions

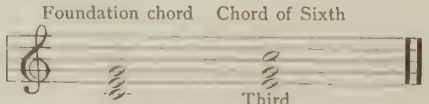
of the chords.

NOTE. — Bear in mind, that an *inversion* of a chord takes place *only when the bass has some other interval than the root*, and that the previously mentioned inversions of the other parts, as they occur in close and open position and in the various intervals, do not in any way essentially alter the chord.

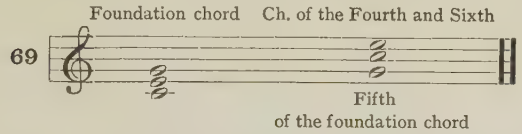
In a triad, two inversions are possible:

(*a*) the Chord of the Sixth (which results when the bass takes the Third of the chord):

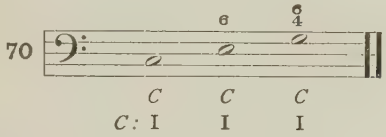
68



(*b*) the Chord of the Fourth and Sixth (which results when the bass takes the Fifth of the chord):



The Chord of the Sixth is marked by a 6 over the bass note; the Chord of the Fourth and Sixth, by the figures $\frac{6}{4}$.



For indicating the *keynote* we shall in future use letters, and Roman numerals for marking the *degrees*, as hitherto; in so doing, as may be seen in No. 70, only the *position of the root* can be taken into consideration, and not that of the temporary bass note.

NOTE. — Just as the root of the chords of the Sixth, and Fourth and Sixth, in No. 70 remains *C*, and is not the bass note *E* or *G*, the chord itself is *not* founded on the third or fifth degree, respectively, but constantly on the *first* degree; for these chords are *no new chords* whatever, but mere transpositions of the same chord brought about by the bass; they are, therefore, *derivative chords*.

Any triad may appear in similar inversions.

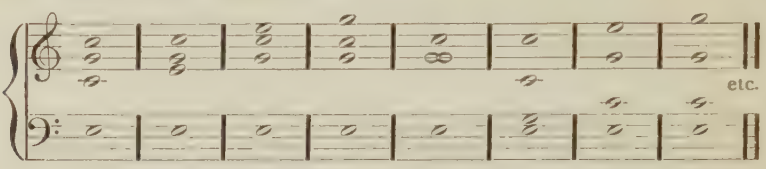
APPLICATION

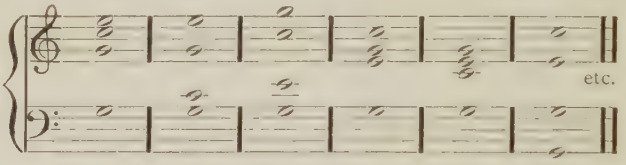
By employing the inversions of the chords we obtain greater variety in harmonic progression, and the progression of the parts — especially of the bass — becomes more flowing.

According to the rules for doubling an interval of the triad (on p. 13) it will be better, in four-part writing, to double the *root-tone of the foundation chord* when we use a chord of the sixth. The bass tone of the chord of the sixth (that is, the original Third), or the third above the bass tone (the original Fifth), should be doubled only when the natural progression of the parts demands it, or for the purpose of avoiding incorrect progressions. But we repeat (see p. 27) that the leading-tone, even when it lies in the bass, is not to be doubled.

We shall also merely repeat, that the disposition of the three higher parts is determined only by the part-leading, but has otherwise no essential influence on the chord.

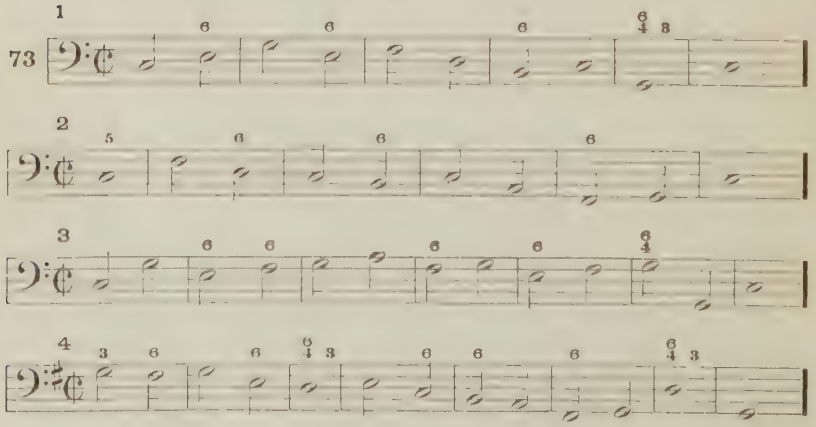
The Chord of the Sixth (called "sixth-chord," for short) may therefore appear in the following forms:

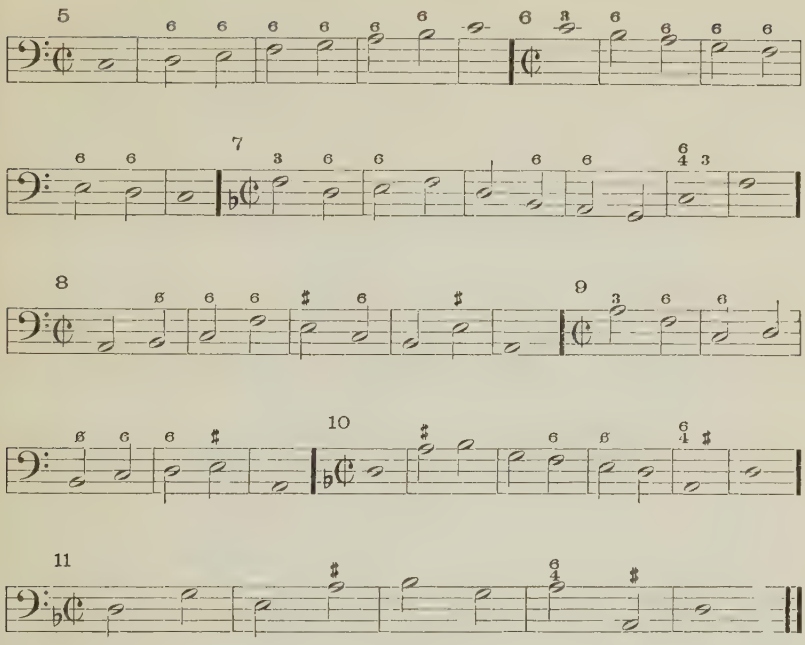
71

The Chord of the Fourth and Sixth (called "four-six chord," or — less properly — "six-four chord") is not used as often as the sixth-chord, and only under certain conditions to be mentioned further on. It occurs most frequently in the formation of closes. The best tone for doubling is the *bass* (the *Fifth* of the foundation chord); the chord is found in forms like the following:

72

For connecting these chords with others no further mechanical rules are needed, than those already given; we shall also dispense with the mere mechanical combination of two or three chords, and apply these chords directly in the writing of little pieces which, however insignificant they may seem, are none the less complete in themselves and therefore better calculated to show the relations of their several members.

EXERCISES

73





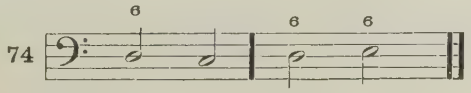
Remarks on the Exercises

The 5 over the first note in Ex. 2 signifies that the soprano takes the Fifth; so here — and similarly in future cases — it determines the position of the chord. When there is no figure over the first bass note it may be assumed that the soprano may most conveniently take the octave of the bass.

In the same exercise the *diminished triad* on the seventh degree appears as a *sixth-chord*. It occurs oftenest in this position. Remember that its *root* is not doubled, because it is the *leading-tone;* in most cases its Third (the bass tone of the sixth-chord) is doubled. Sometimes the part-leading occasions a doubling of the Fifth. In the diminished triad on the second degree in minor, it is allowable to double the root also.

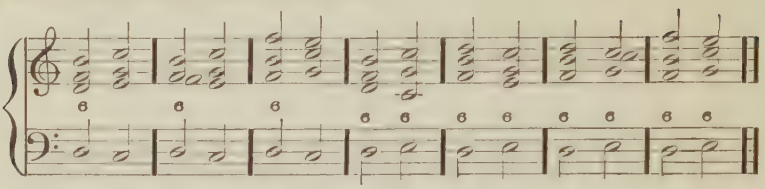
The progression of the diminished triad is always determined by the leading of the bass. The natural tendency (resolution) of the diminished triad in its root-position was shown before, on p. 27.

Ordinarily the bass progresses thus:

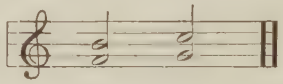


and the other parts progress this way:

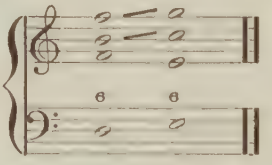
75



The above examples show that the inversion of the diminished Fifth — that is, the augmented Fourth — does not necessarily progress *in four-part writing* as it did in the two-part illustrations given on p. 27; No. **75** shows, in the first example and others, how *b* and *f* in soprano and alto can progress to *c* and *g:*

76

Because this chord sounds much like the dominant seventh-chord (explained later), beginners are very apt to lead the diminished Fifth *downward* even when it has been transformed, by inversion, into an augmented Fourth. But, as the above examples show, it is necessary to lead the diminished Fifth downward only when it lies, as an actual diminished Fifth, *above its root*, so that a progression like this:

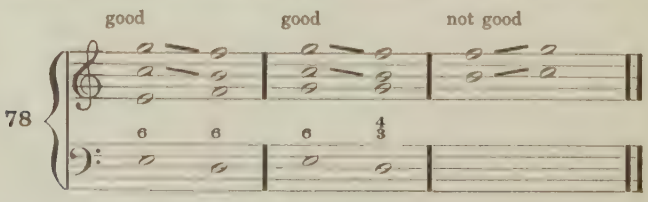
77



would be wrong on account of the parallel Fifths.

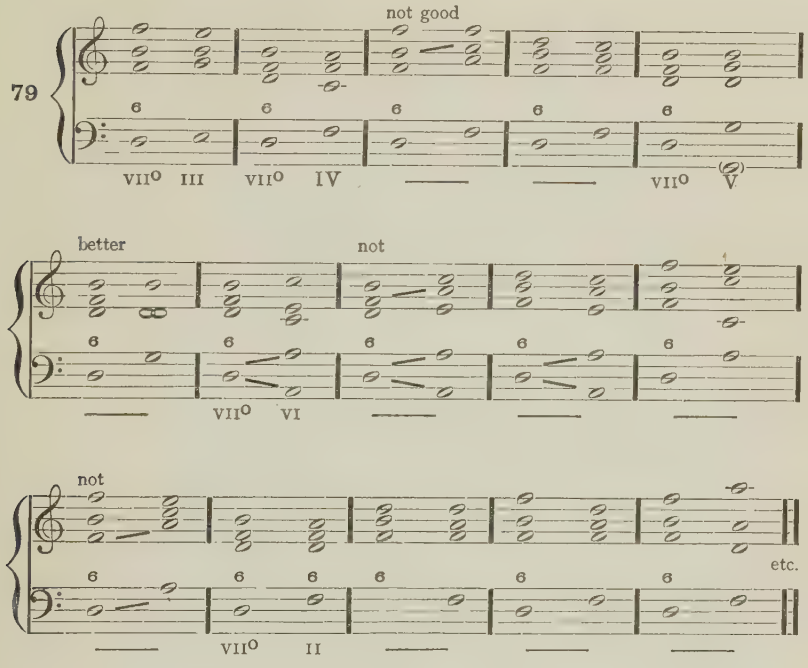
Note. — Here we may also remark, that parallel Fifths in which one Fifth is diminished and the other perfect, are to be permitted *in case the diminished Fifth follows the perfect Fifth; but not when the perfect Fifth follows the diminished:*

78



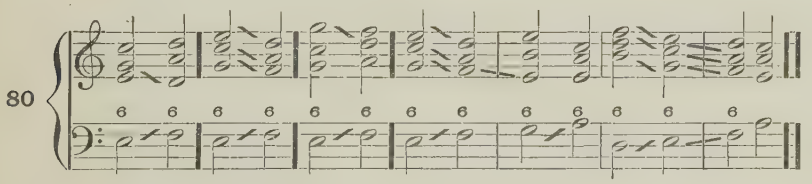
(Compare the Note on p. 16.)

The progression of the parts in the diminished triad will be different, when the bass leads over to some other chord than the tonic triad. A few chord-connections will illustrate this point.



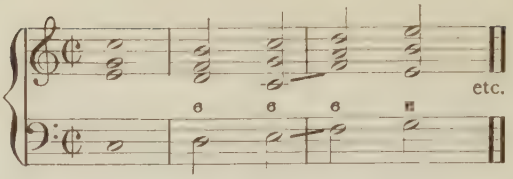
The diminished triad on the second degree in minor admits of different treatment, because its root may be doubled. (See p. 39.)

A succession of *two or more sixth-chords*, where the bass progresses stepwise (as in No. 73, Ex. 3, and elsewhere), will necessitate the progression of one or more parts in contrary motion to the bass:



The series of sixth-chords found in No. 73, Ex. 5 and 6, may be worked out in various ways; but the best way will be to imitate the regular bass progression in the other parts, as below:

81



Covered octaves, like those in measures 2 and 3 between tenor and bass, cannot be avoided in such cases. From this we may conclude, that *isolated* part-progressions contrary to rule have not the special importance, compared with the regularity of the whole movement, that they otherwise have; since the shaping of a detail, even though it ought to be as perfect as possible, must always be subordinated to the general effect.

NOTE. — It cannot be denied that the above theorem may easily be misconstrued by the beginner. Still, the principle had to be established; and we shall add, to avoid possible error, that the final decision in such matters should be left to those whose judgment is fully matured by experience and practice.

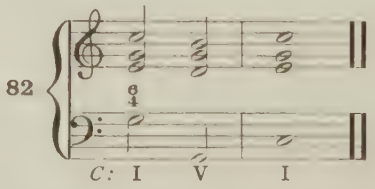
THOROUGH-BASS NOTATION

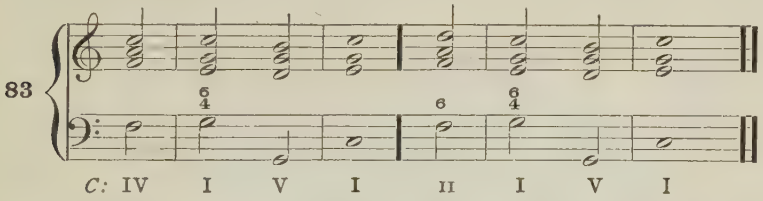
The figures and signs written over a given bass are termed Thorough-bass Notation. Some have already been explained, as the chromatic signs so often occurring in minor. The figuring of the sixth-chord, and chord of the Fourth and Sixth, was given on p. 36. A slanting stroke through a figure (notice the 6 in Nos. 73, Exs. 8, 9 and 10) means that the interval should be raised by a chromatic semitone; a ♯ (or a ♮ after a ♭) beside the figure (6♯, 6♮, 5♮) means the same thing. Other figurings will be explained as they occur.

CLOSE FORMED WITH CHORD OF THE FOURTH AND SIXTH

In the exercises under No. 73 we find the earlier closing form extended, and much more precisely defined, by the inversions of the triad. For it appears that the four-six ($\frac{6}{4}$) chord of the tonic triad, coming before the dominant chord, decidedly indicates a close.

82

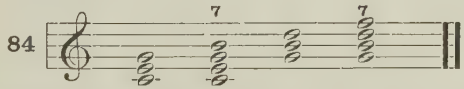


This four-six chord is often preceded by the triad of either the fourth or the second degree.

While the four-six chord decidedly indicates a close, and also has a decisive influence in modulation into foreign keys, its entrance under other conditions has a very weak effect. Consequently, its practical employment depends on certain conditions to be discussed hereafter.

CHAPTER IV

Chords of the Seventh

The seventh-chords are founded on the triads. They are formed by adding another Third above the Fifth of the triad, this added Third being the Seventh of the root.



Besides the various kinds of triads, there are various kinds of Sevenths forming a number of different harmonies of the Seventh.

Common Characteristics of the Seventh-Chords

The seventh-chords are not as independent as most of the triads, but show a marked tendency to progression, so that, by themselves, they never have an effect of completion or finality, but only in combination with triads. But they make the relations (the interconnections) of the chords closer and more intimate, and furnish, by reason of this characteristic quality, excellent material for our work in chord-connection and more especially in part-leading.

Dominant Seventh-Chord in Major and Minor

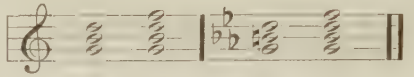
The most important seventh-chord, and that which occurs oftenest, is the

Dominant Seventh-Chord,

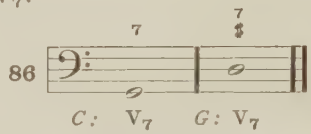
sometimes called the *principal* seventh-chord.

Like the dominant triad, it stands on the fifth degree, and has just the same form in major and minor — a *major triad* with a *minor Seventh added* above the root.

85

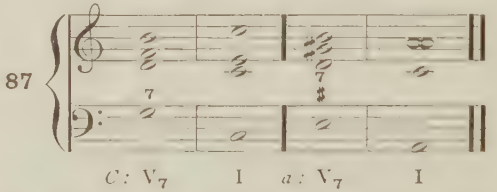


In its root-position it is indicated by a 7 over the bass note; and in our mode of figuring, by V_7:

86

The relation between the dominant triad and the tonic triad was clearly exhibited, in the main, in the form of the close explained above (p. 20). The cadence is still more strongly marked when the seventh-chord participates.

These chord-connections show how the cadence is formed:

87



NOTE. — Observe, that the triad following the seventh-chord is incomplete; in both cases the Fifth is missing. The reason will be shown directly.

The natural tendency in these chords toward a point of repose, together with the progression to ("blending with") a triad, is called the

Resolution of the Seventh-Chord.

When the connection of the dominant seventh-chord with the tonic triad is effected as shown in No. 87, or similarly, it is called a

Closing Cadence.

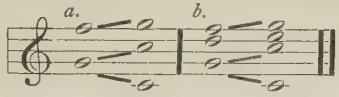
The progression of the intervals of the seventh-chord calls for remarks which have an important bearing on the part-leading.

The Closing Cadence, as the regular resolution of the dominant chord of the Seventh, shall first be taken up by itself.

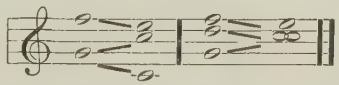
The Seventh, as the characteristic interval of the chord, is limited to one special progression by its relation to the root. Taking the pro-

gression of the bass (which has the root of the chord) for granted, an upward progression of the Seventh will appear impossible:

88

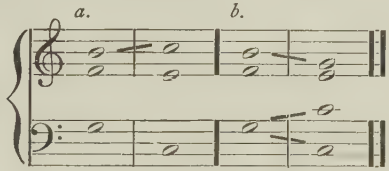


even when (as at **b**) a third part is added; whereas its downward progression affords complete satisfaction:

89

The progression of the root, upward by a Fourth or downward by a Fifth, being already settled, the progressions of the Third and Fifth in the seventh-chord are still to be noticed.

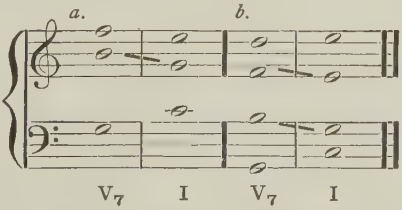
The *Third* of the dominant seventh-chord is always the leading-tone of the scale; hence, its natural tendency follows our previous comments on the leading-tone (p. 27), that is, it will progress upward by a minor second, and, therefore, **90b** will not seem as natural as **90a**.

90



In **90b** the Third is set in the highest part, which renders the unusual effect of its progression peculiarly noticeable. This leading becomes tolerable when the Third is set in an inner part:

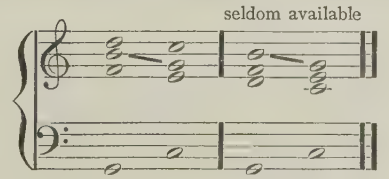
91



This downward leading of the Third (leading-tone) may therefore be permitted under the following conditions:

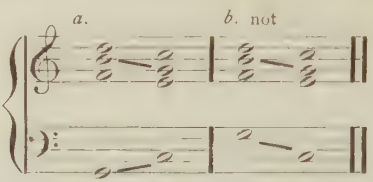
(*a*) When the Third is not in soprano, but in an inner part; *e.g.*,

92



(*b*) When the bass progresses in contrary motion; *e.g.*,

93



You will see the reason for the second rule when you observe the covered Fifths between alto and bass in the last example.

The progression of the *Fifth* in the seventh-chord is free. Although it generally moves parallel with the Seventh a step downward, some progressions of other parts may render it advisable to lead it a step upward, as in No. **91**, where the *d* in soprano is led to *e*.

A summary of the above remarks gives us the following rules for the regular resolution of the seventh-chord, and more especially for the closing cadence.

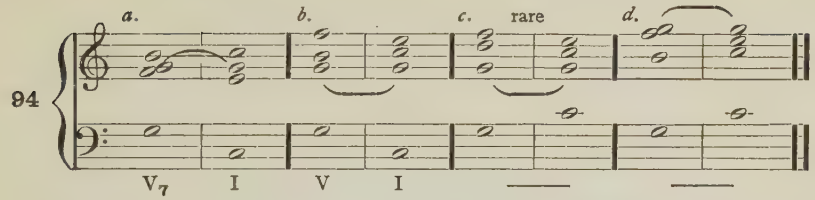
The Seventh progresses a diatonic step downward;
The root progresses by a fourth upward or a fifth downward;
The Third is led a step upward, in contrary motion to the Seventh;
The Fifth may be led either upward or downward by a step.

Where a Third is led in contrary motion to the Seventh, remember what was said about the root and the diminished Fifth in the diminished triad (see p. 27). For both intervals are likewise found in the dominant seventh-chord.

APPLICATION

The dominant seventh-chord is seldom employed in the midst of a movement *in the manner with which we are now familiar*, except in the formation of a cadence. Should it happen, it will be only in such a connection that the feeling of a final close is not aroused.

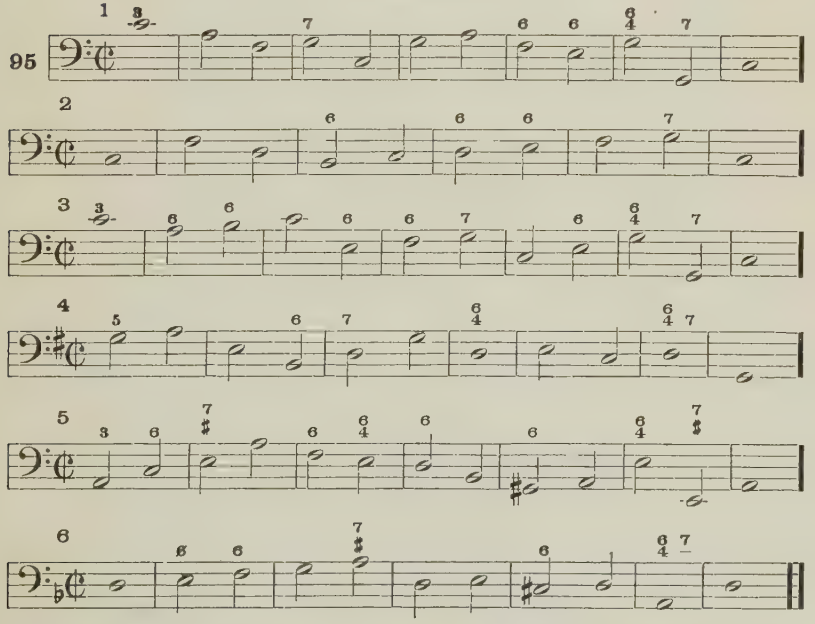
This occurs particularly when the Seventh of the chord lies in the soprano (which renders the close incomplete), or when the dominant seventh-chord enters on the strong beat (*thesis*), because in the complete close the tonic triad must fall on this beat (see p. 20).

Moreover, the chord itself often appears incomplete through the omission of an interval; but this interval can be only the Fifth (or very rarely the Third), as the omission of root or Seventh would wholly alter the chord and render it unrecognizable.

At **a**, **b** and **d** the Fifth is omitted, at **c** the Third, the root being doubled instead in all cases. The root being held over, this doubling effects the closest connection with the next chord, and the resolution of the seventh-chord in this form gives us the complete tonic triad, which was not the case in former resolutions (see No. **87**).

Concerning the omission of a chord-interval we subjoin the following observation:

By the part-leading a chord may be presented in incomplete form; the omitted interval will usually be the Fifth of the foundation chord.

EXERCISES



These exercises require no further explanation. We have already stated that the seventh-chord is indicated, in the position with which we are acquainted, by a 7; and that the sharp under it (or any chromatic sign without a figure beside it) refers to the Third of the bass note (see p. 33).

CHAPTER V

Inversions of the Seventh-Chord

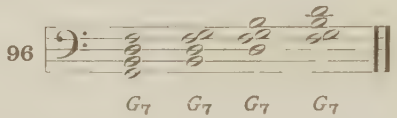
The position of the seventh-chords, like that of the triads, may be changed by setting some other interval than the root in the bass.

The *first inversion* results, when the bass takes the Third of the root;

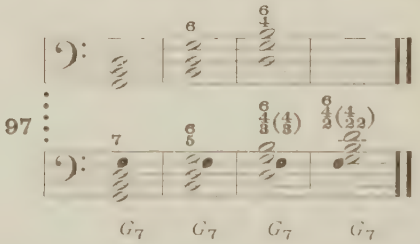
The *second*, when the bass takes the Fifth; and

The *third*, when the bass takes the original Seventh of the chord.

In a condensed form, the inversions are as follows:



On comparing these inversions of the seventh-chord with those of the triad, the similarity of the positions is at once apparent:



These derivative chords take their names from the positions of their intervals.

The *first inversion* is called the *Chord of the Fifth and Sixth* (for short, the "five-six" chord).

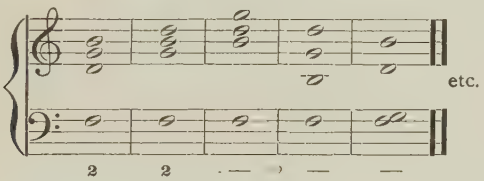
The *second*, the *Chord of the Third, Fourth and Sixth* (for short, the "three-four" chord).

The *third*, the *Chord of the Second, Fourth and Sixth* (for short, the chord of the Second, or "second-chord"; sometimes, the "two" chord).

Their thorough-bass figuring is given in the above example.

Do not forget that in these inversions, just as in those of the triad, the important matter is the position of the bass note (lowest note), and that the other intervals can be variously distributed among the higher parts; for example:

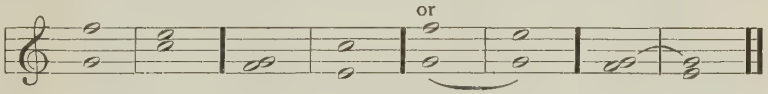
98



APPLICATION

The regular progression (resolution) of these derivative chords is based on that of the foundation chord. In this latter chord the dissonant tone (the Seventh) determined the progression in one direction; and in these derivative chords the root and Seventh, the two tones forming the dissonance, also appear either as a Seventh or, by inversion, as a Second, and exhibit the same tendency to that progression (resolution).

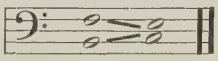
99



PROGRESSION OF THE FIVE-SIX CHORD

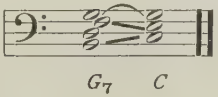
Since the original Seventh appears in the chord of the Fifth and Sixth also as a dissonance to the bass tone (a diminished Fifth), whose progression was discussed above (p. 27),

100



the natural resolution of the chord will be like this:

101



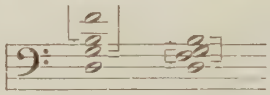
Here the progression of the root formerly shown is absent, because *G* is held over in the soprano and is transformed into the Fifth; but, although the soprano or an inner part, on account of its situation, can seldom carry out this progression, it nevertheless forms the basis of this harmonic connection — as shown in No. **101** by the marking G_7 *C*.

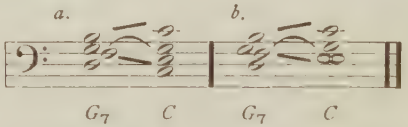
However, the chief reason why the soprano or an inner part cannot, in such cases, carry out the progression of the root visibly, is to be sought in the character of these parts, which is better suited to blending and combining the chords than to laying their foundations, this last being the function of the bass.

NOTE. — In these cases quite different progressions of the bass, such as would result from a freer leading of the parts in certain circumstances, are not excluded; but a sensible connection and relation must subsist between the successive chords.

PROGRESSION OF THE THREE-FOUR CHORD

This chord contains, besides the Seventh and its inversion, the diminished Fifth, or its inversion, the augmented Fourth:

102

This chord is resolved thus:

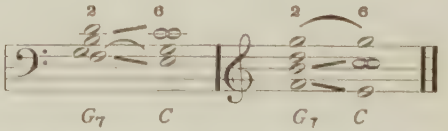
103

The bass (the original Fifth) may progress in either of the ways given.

PROGRESSION OF THE CHORD OF THE SECOND

This chord is peculiar, in that the original dissonant intervals of the Seventh and the diminished Fifth can occur only in their inversions, as the Second below and the augmented Fourth, respectively.

The progression of this chord is as follows:

104



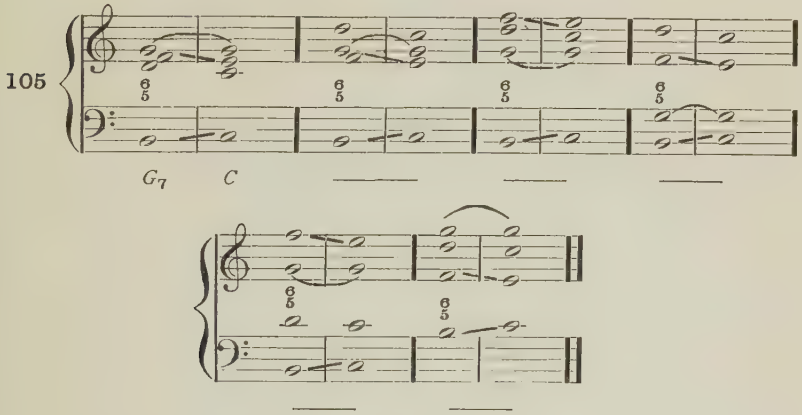
Thus the *chord of the Second* is resolved into a *chord of the Sixth.*

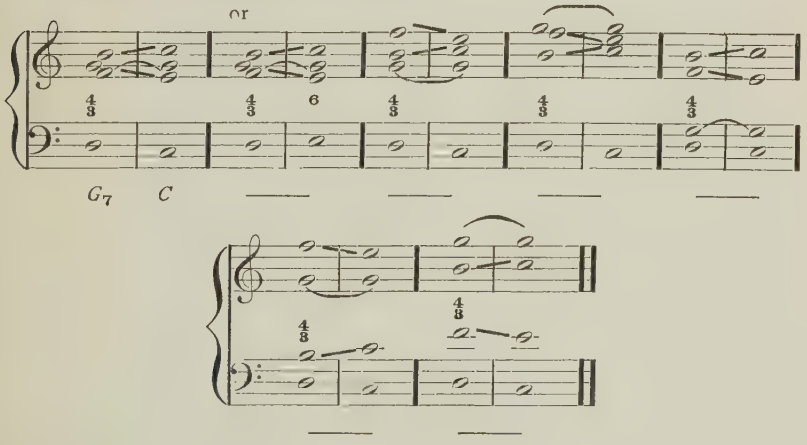
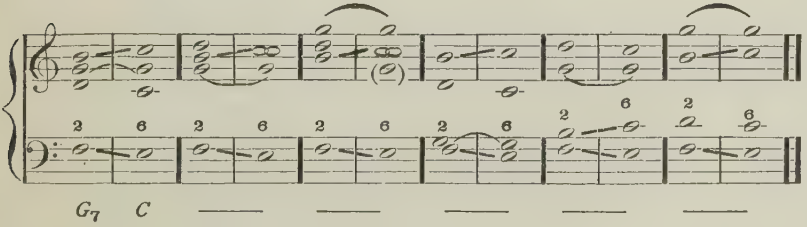
From these resolutions it may be seen that they all are founded on the natural progression of the dominant seventh-chord, previously called a *cadence;* for in each case we find root-lettering to be G_7 C or V_7 I.

Consequently, these resolutions themselves form cadences, though not of so complete a sort as those given before, which are called "complete cadences," while we call this last kind "incomplete cadences."

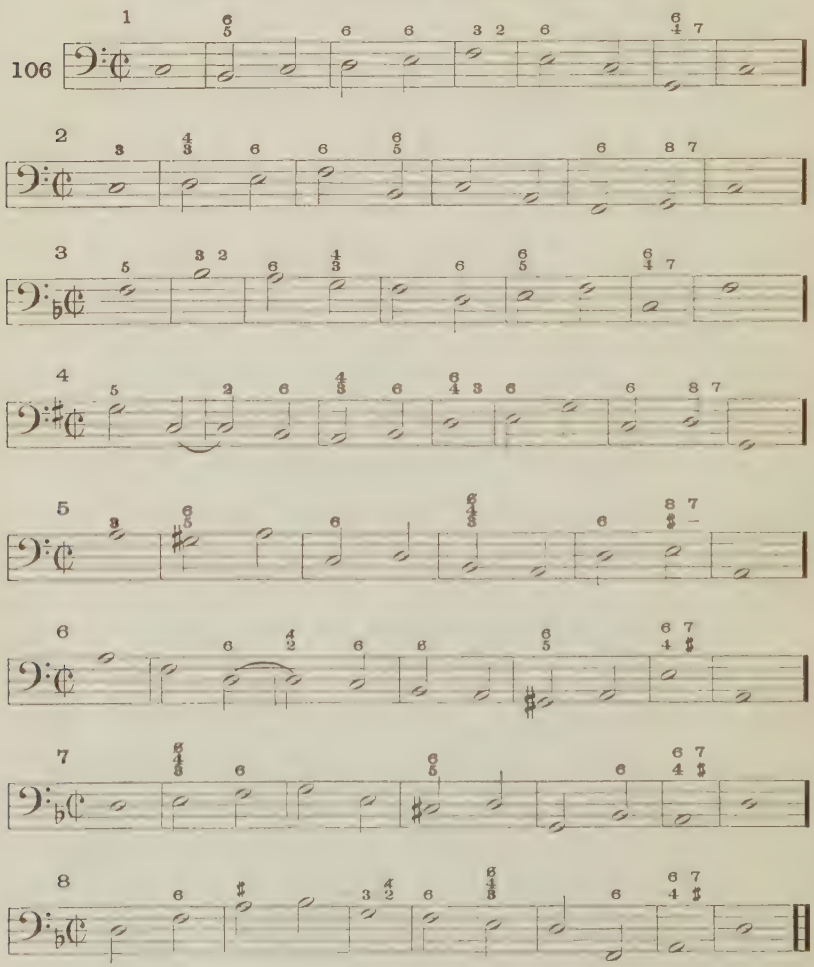
VIEW OF THE NATURAL PROGRESSIONS OF ALL INVERSIONS OF THE DOMINANT SEVENTH-CHORD, IN VARIOUS POSITIONS

(*a*) Chord of the Fifth and Sixth.



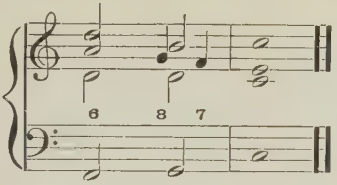
(*b*) Chord of the Third and Fourth.

(*c*) Chord of the Second.

In the third example among the resolutions of the chord of the Second the leading-tone (*b*) might equally well be led downward, to *g*, instead of to *c;* in fact, this mode of progression is very common in such cases, because it displays the following (tonic) triad in fuller harmony. Here it does no harm that the bass progresses in the same direction, because an incorrect progression (like the covered Fifths in No. 93b) does not result from leading the Fifth in parallel motion. Such a leading of the soprano is ordinarily forbidden, at least unless more important considerations are involved. (Compare on this head the remarks on pp. 44 and 45.)

EXERCISES IN THE USE OF THESE CHORDS



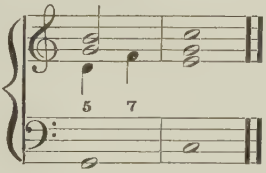
NOTE. — The figuring in the second measure before the last in Exercises 2, 4 and 5, signifies that the Seventh is not to enter with the chord, but only after the octave has sounded. Ex. 2 would, therefore, be written so:

107



The figuring 5 7, which sometimes occurs (though not in these present exercises), means that the Seventh should follow the Fifth:

108



CHAPTER VI

Secondary Harmonies of the Seventh

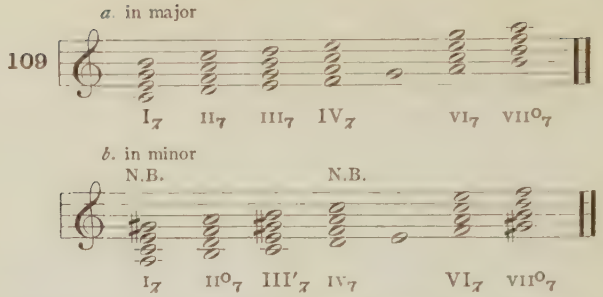
While among the triads *three* "fundamental chords" are requisite for establishing the key (the relation to the tonic triad as the central point), only *one principal seventh-chord*, the Dominant Seventh-chord, is needed to fix the key beyond a doubt by virtue of its characteristic features, and to show forth the key by means of its natural progression to the tonic triad.

NOTE. — The Seventh of the dominant chord being at the same time the root of the subdominant triad, the relation of the two tones *g* and *f* (as roots of the "dominant" triads) to their common central point *c* (root of the tonic triad) is manifest. (See p. 10, No. 3.)

Besides this dominant chord of the Seventh (also called "fundamental," or "primary," seventh-chord), other seventh-chords may be formed in combination with the remaining triads in major and minor whose relation to a definite key, though undeniable, is by no means so decided as that of the dominant chord. They are called

Secondary Seventh-Chords

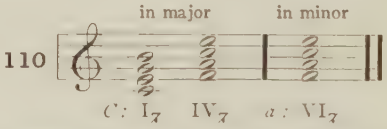
and are formed by simply adding to a triad the Seventh of its root.



Among these there are some chord-forms which have a harsh and, consequently, strange effect taken out of connection with other chords; because, as noted above, their relation to a fundamental key is not so clear and decided as in the case of the dominant seventh-chord. While they may not be used so much, they are nevertheless adapted to lend variety and peculiar coloring to the harmonic progressions.

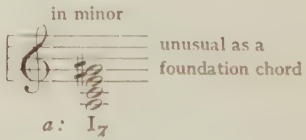
These secondary chords of the Seventh may be classified as follows:

(*a*) Major triads with major Seventh:

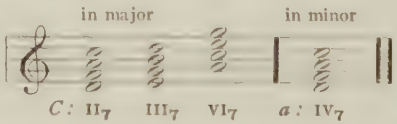


N.B. — Major triads with minor Seventh always form dominant seventh chords.

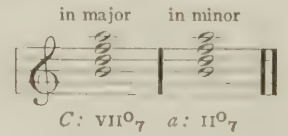
(*b*) Minor triad with major Seventh:



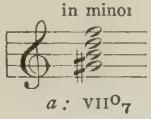
(*c*) Minor triads with minor Seventh:



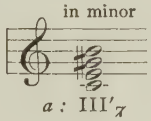
(*d*) Diminished triads with minor Seventh:



(*e*) Diminished triad with diminished Seventh:



(*f*) The augmented triad, with major Seventh:



This last, as found on the third degree in minor, can be used, but is rare, and of equivocal effect, from reasons already elucidated when considering the augmented triad.

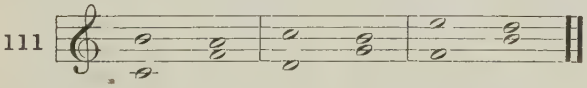
NOTE. — This chord, differently explained, will be met with again in Chapter X.

USE OF THE SECONDARY SEVENTH-CHORDS IN MAJOR

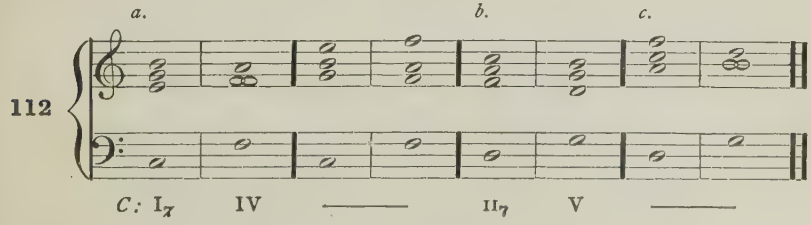
The Seventh, or its inversion, the Second, whether major, minor, diminished or (referring only to the Second) augmented, always has a tendency to progression or resolution in its relation, as a *dissonance*, to its root.

For the secondary seventh-chords, this *natural progression* is none other than that already established for the dominant seventh, namely, *a step downward* toward the root, when the latter is led downward by a Fifth or upward by a Fourth.

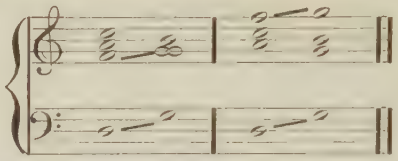
The progression of the principal intervals in the chord being thus given:



we require no new rules for the other intervals; the Third will be led a step upward, and the Fifth may progress either way.

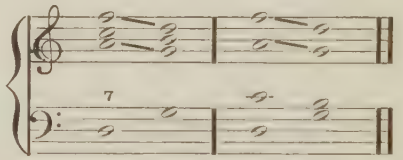


NOTE. — In examples **b** and **c** the Third has a different progression, because its regular upward leading by a major second would result in covered octaves:

113

which are now avoided. (See No. 32.)

At all events it will be advisable in many cases to lead the Third downward, when no incorrect progression (bad covered Fifths or octaves) results; for this often makes the following harmony fuller. This remark includes the *major* Third, which, moreover, may be led downward under certain conditions even if in soprano, as the fifth example in No. 115 proves. Such a leading is, of course, *inadmissible* for the leading-tone (that is, for the Third in the dominant seventh-chord), as has been repeatedly explained before; still, it may occasionally be justified under special conditions (in a sequence, or the like).

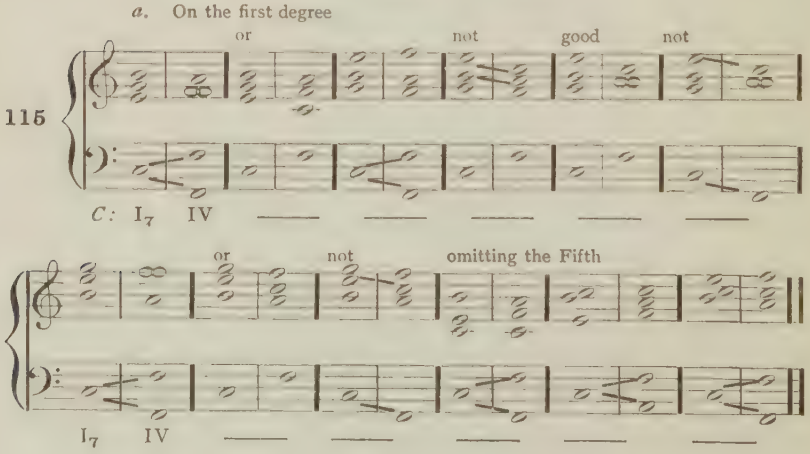
The following covered Fifth is preferable to the doubling of the leading-tone in No. 112c;

114

though even this may depend on circumstances whose importance can be measured only where they occur in practice.

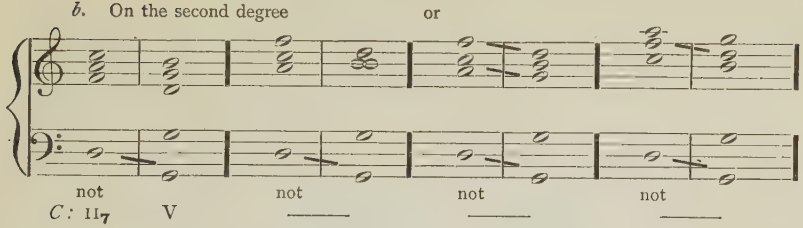
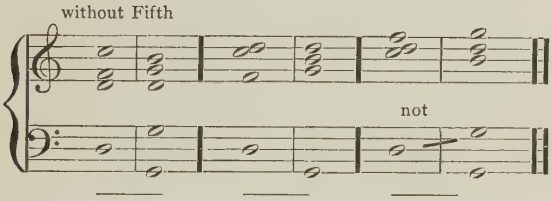
NATURAL (CADENCING) PROGRESSION OF THE SECONDARY SEVENTH-CHORDS IN MAJOR

a. On the first degree

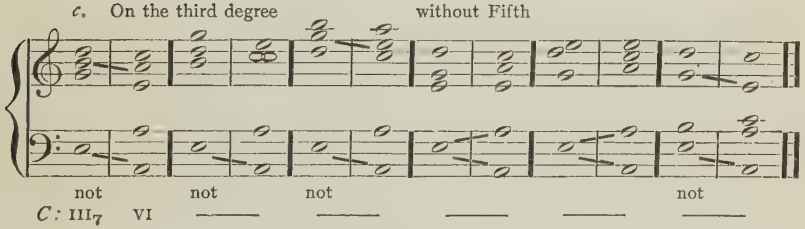
115

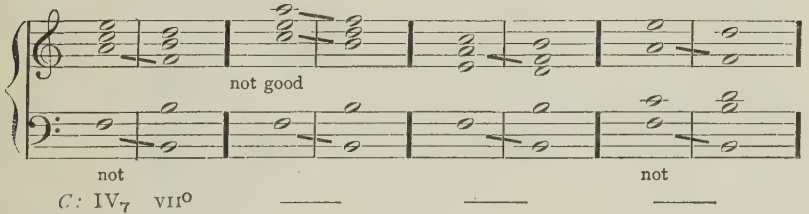
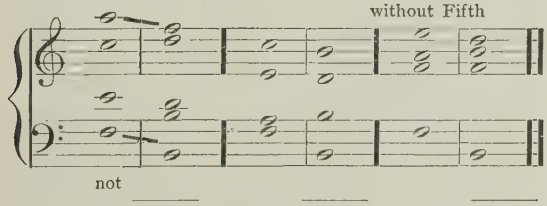
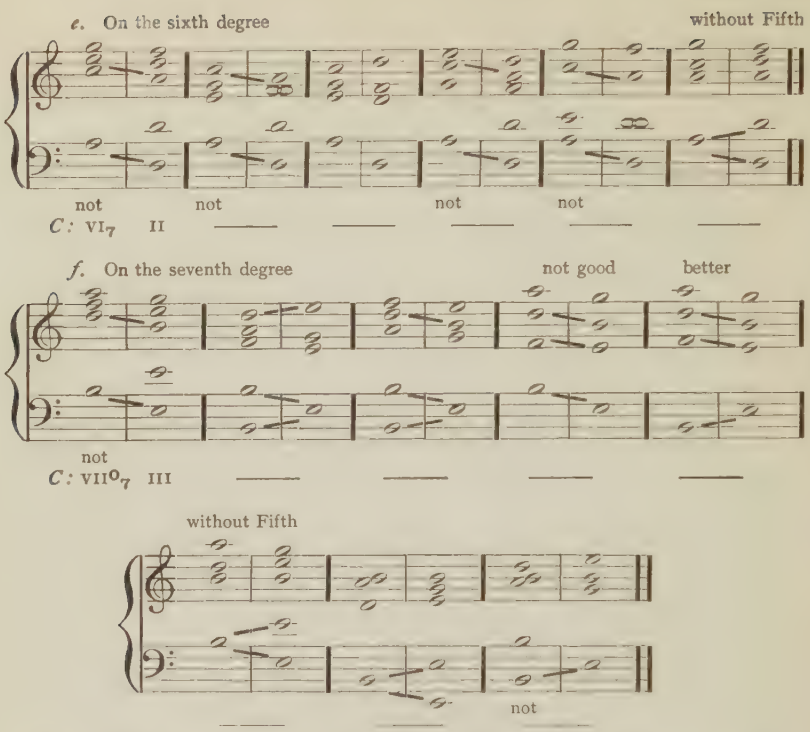


b. On the second degree or



c. On the third degree without Fifth



d. On the fourth degree (rare with this resolution, and to be used, in general, only in a sequence, on account of the doubling of the leading-tone).

Note. — The above progressions of all seventh-chords are neither exhaustive as to position, nor presented as the only possible ones.

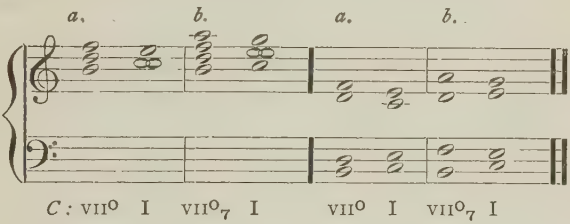
The only difficulty in effecting such progressions lies in the covered Fifths and octaves frequently resulting. Furthermore, all the accompanying remarks, like "not," or "not good," which usually refer to the leading of the bass (where it produces these incorrect progressions in conjunction with other necessary leadings of the parts), are to be regarded merely from a theoretical standpoint; whereas these and similar progressions, even in so-called "pure harmony," must often be judged according to the conclusion reached in the paragraph following No. 81.

Since theory has not yet succeeded in establishing positive rules for all cases of this kind, only a thorough training in harmony and a rightly educated musical ear can fit one to distinguish the true and the false, the permissible and the inadmissible, in such progressions — especially in view of the infinite variety of harmonic combinations. More about this matter further on.

The Peculiar Progression of the Seventh-Chord on the Seventh Degree

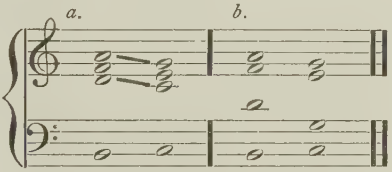
In the above view (No. 115) of the progressions of all seventh-chords in major, the seventh-chord on the *seventh degree* was led (similarly to the others) into the triad on the third degree; that is, the progression of

the root proceeded, as with the other seventh-chords, by the leap of a Fourth upward or a Fifth downward. This form of its progression is rather rare, and usually occurs only in a sequence, for the sake of regularity in the harmonic leading. Of more frequent occurrence is the progression based on that of the *diminished triad* (see pp. 27 and 39), to which the *Seventh* is now added; namely, the progression to the tonic triad.

116

This example shows plainly, that the relation of the *diminished triad* to the *tonic triad* is not altered by the addition of a Seventh; the tendency is rather strengthened.

Notice, besides, that when the chord appears in the above position the Third of the following triad must be doubled (see No. **116b**), otherwise parallel perfect Fifths would result (see **117a**),

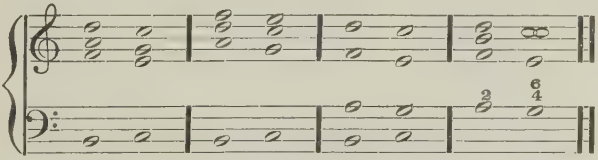
117



unless one part is led by a leap, as at **b**, a leading of the tenor often met with, and very effective in spite of the covered octaves.

It is characteristic of this chord that it has a satisfactory effect only in the position where the *Seventh* is in the *highest part.* The remaining positions, even if not useless in practice, leave a less clear impression.

118

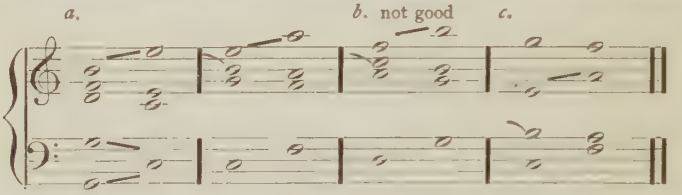


NOTE. — Here we cannot consider whether the reason for this is that the Seventh in these progressions really bears the character of a Ninth, which, though similar to that of the Seventh, is of much broader scope, and does not tolerate the position of an inner part. (Some theorists maintain that this chord, with its resolution, is actually based on the dominant seventh-chord with an added Ninth.)

Freer Treatment of the Third and Fifth in the Seventh-Chord

Various progressions of these intervals have already been employed in our previous chord-connections. The Fifth goes upward or downward; the Third either a step upward or a leap of a Third downward. Most of these leadings were effected in consideration of and for avoiding covered Fifths and octaves. Besides these occasionally incorrect progressions, the Third, more especially, may make others which often render the part-leading freer and more independent. For illustration:

119



This leading is also allowable in the inner parts when the chord-position permits, as at **c**. (Compare Examples **369**, etc.)

The leading of the soprano at **b** is not good, because it results in the leap of an augmented Fourth.

The interval between the fourth and seventh degrees is called the Tritone (*f b*) because it embraces three whole tones. More on this point will follow.

A different leading of the Fifth is possible only when the bass makes some other than the above root-tone progression. And still further part-leadings will be practicable as soon as we take up other chord-connections than those hitherto employed.

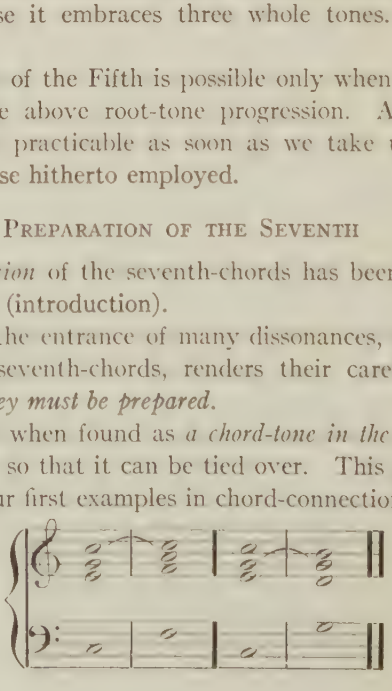
Preparation of the Seventh

So far the *progression* of the seventh-chords has been explained, but not their *preparation* (introduction).

The harshness of the entrance of many dissonances, and particularly of most secondary seventh-chords, renders their careful introduction necessary; that is, *they must be prepared.*

A tone is *prepared* when found as *a chord-tone in the preceding chord, and in the same part*, so that it can be tied over. This preparation of a tone was shown in our first examples in chord-connection; *e.g.*,

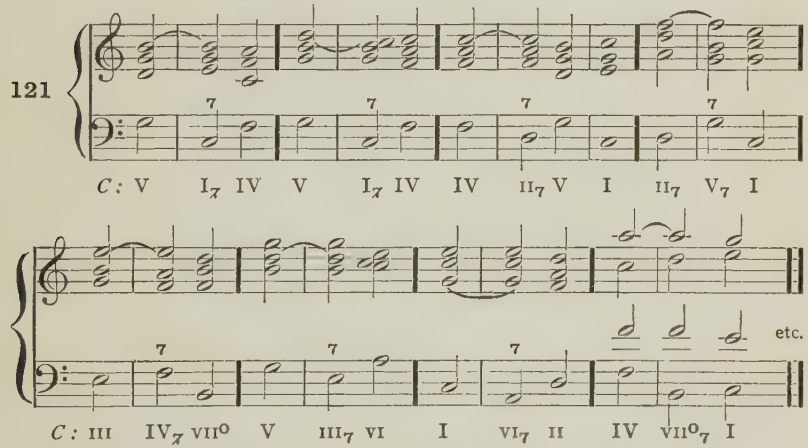
120



Here it may be said that the soprano *c* in the second chord is *prepared* by the *c* in the first chord; and similarly with the alto *g* in the next example.

However, the necessity for preparing Sevenths arises, not only from the harshness of their entrance when they enter freely (without preparation), but especially from the character of the harmonic connection and blending of two successive chords which is peculiar to the Sevenths, and which would not be manifested without the preparation.

The preparation of the Seventh may be effected as follows:

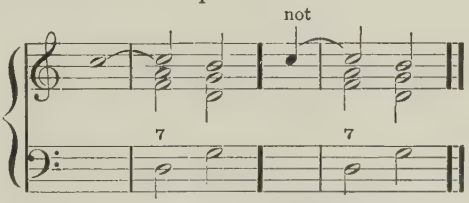
121

In all these examples, the tone bound over to the same tone in the next chord by a tie forms the preparation of the Seventh.

Following are the rules governing such preparation.

(*a*) The tone of preparation falls on the weak beat (*arsis*);

(*b*) It must be at least as long as the Seventh following it; it may be longer, but not shorter. For example:

122



NOTE. — The preparation of the Seventh is one of the most important matters taught in Harmony. It should be carefully studied in theory and practice, for on it depends what is most essential to the intimate interconnection of chords.

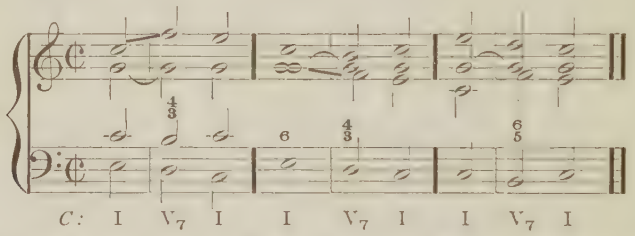
Although exceptions, even in this case, may be found in practical composition, the pupil is again reminded that they are, in fact, only exceptions, and powerless to prove anything against the correctness of the laws controlling harmonic connection. Each

exception has to be judged of by itself, according as it is necessitated, or intentionally produced, by some special position or condition. (See Note on p. 33.)

Such exceptions generally occur with the minor Sevenths (they being the least harsh ones), like those on the second and seventh degrees; good part-leading always makes the effect smoother.

A special exception to the necessity for preparation is found, however, in the Seventh of the dominant chord, also termed the Essential Seventh. This interval, by reason of its relation to the tonic triad (to the ruling key), enters with an effect less harsh and foreign than the other Sevenths, and does not require preparation in every case.

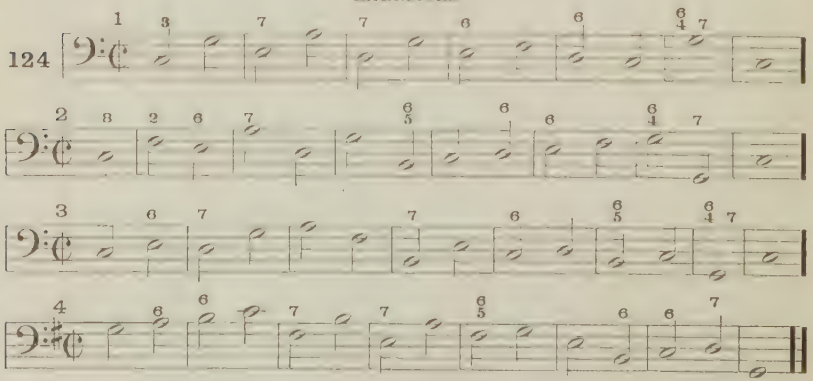
In continuation of our former observations we shall add that *the dominant Seventh, although it does not require preparation, should not enter freely unless the root is already present*, if the part-leading is to remain pure and smooth.

123

NOTE. — The so-called "passing Sevenths," which, as such, can evidently not be prepared, conform to the rules for passing-notes, to be explained further on. Concerning the cases where neither root nor Seventh of the dominant chord is prepared, see Example 380.

Moreover, the Seventh on the seventh degree in major and minor (in minor, the diminished Seventh) by no means has invariably to be prepared. This comes from its peculiar character, which plainly discovers its close relation to the dominant seventh-chord.

EXERCISES

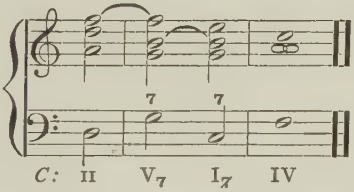
124



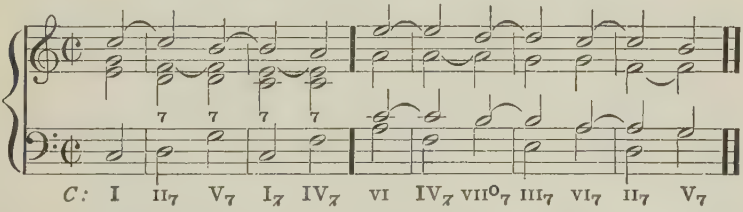
Interconnection of the Seventh-Chords

Hitherto we have always shown the progression (resolution) of the seventh-chords to the triad on the fourth degree above (or, what is the same thing, on the fifth degree below). Instead of a triad, the seventh-chord on the same degree may follow.

The progression of the parts then remains the same; only the Third of the first seventh-chord will now serve as the needful preparation for the following Seventh, and will, therefore, not move on, but remain stationary.

125

Here the Third of the dominant chord, *b*, forms the preparation of the succeeding Seventh.

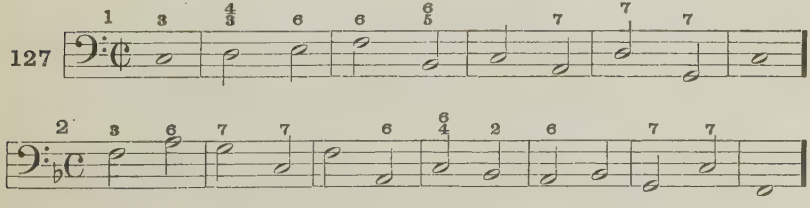
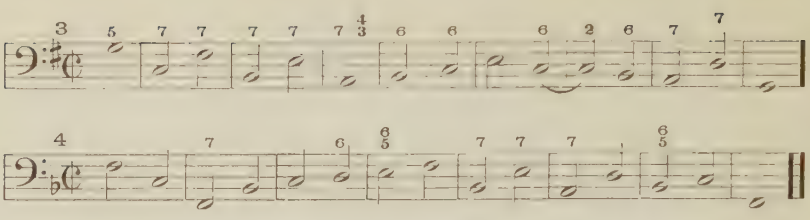
The peculiar feature in this style of chord-connections is, that in one of the seventh-chords the Fifth is always omitted. In Example **125** the Fifth of the first chord is missing. In a succession of seventh-chords every other chord will lack its Fifth.

126

Consequently, for chord-connections of this kind the following formula applies:

When two or more seventh-chords in the root-position occur in succession, the Fifth will be omitted in alternate chords.

EXERCISES

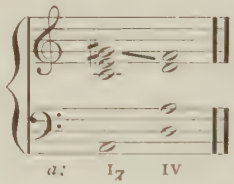
127



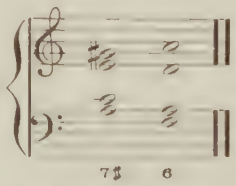
Use of the Secondary Seventh-chords in Minor

The use of the secondary seventh-chords in minor is more limited. Many of them either cannot be employed, or have an uncertain and equivocal effect, in chord-connections like those previously shown in major; the part-leading of others becomes heavy and unmelodic in cadencing progression.

The form of seventh-chord found on the first degree in minor cannot progress like any of those shown before, because the following chord-progression is unsupposable:

128

Note. — Even if progressions like the one below may be effected with the foregoing combination of intervals:

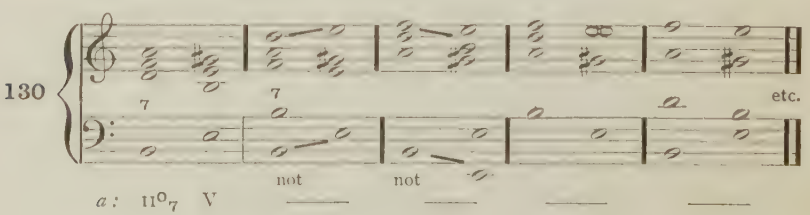
129



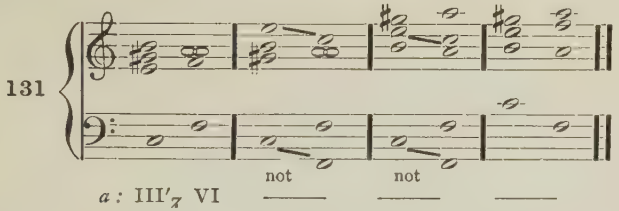
it would appear difficult to prove that they are really progressions of the seventh-chord on the first degree in minor.

The resolution of the seventh-chord on the *second* degree is to the dominant, and is very often employed.

130

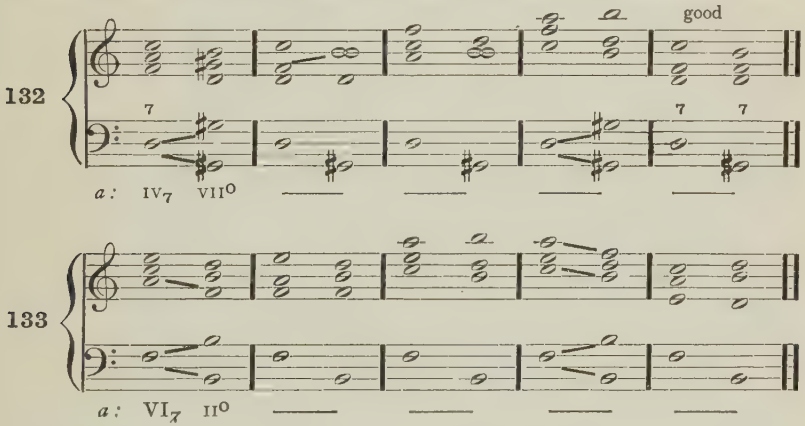


A progression of the seventh-chord on the *third* degree is not impossible:



but it is equivocal, and is probably oftener met with in *C* major than in *a* minor. (See "Altered Chords.")

It may be added, that the *Fifth* in this chord, being an *augmented interval*, will always progress a step *upward*.

The chords on the *fourth* and *sixth* degrees are rare, because the part-leading in their resolutions takes an inconvenient and unmelodic turn.

The forced character of most of these progressions is manifest, and renders them of slight practical utility.

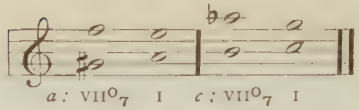
On the *seventh* degree in minor there is an important chord generally known under the name of

the Diminished Seventh-Chord.

This chord cannot be resolved in the same way as all the others, for it would then progress to the triad on the third degree, which we have already characterized as uncertain and equivocal.

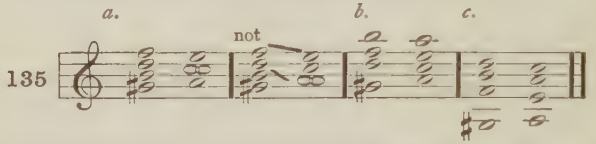
Instead, the resolution of this chord (like that of the seventh-chord on the seventh degree in major — see page 58) is based on the *natural progression of the leading-tone*, on which the chord is founded:

134



While the root of this chord (the leading-tone) moves a *semitone* upward, its *Seventh* moves a semitone downward; the *Third* and *Fifth* are led regularly as in other seventh-chords. In certain positions, however, the leading of the *Third* requires careful attention on account of the incorrect progressions easily resulting (see **135a**):

135



whereas the positions at **b** and **c** allow the Third greater freedom.

Note. — The natural progression of this chord, like that of the seventh-chord on the seventh degree in major, to the tonic triad, occasioned earlier teachers of harmony to regard the chord as founded on the harmony of the dominant seventh; as if a Ninth (major or minor) had been added to the dominant seventh-chord, and its root omitted, this yielding the two seventh-chords on the seventh degree.

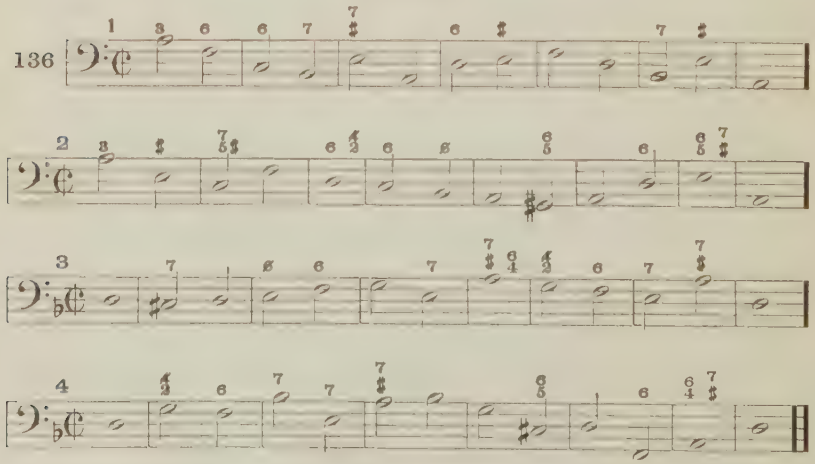
Referring to the remarks on the Ninth-Chord in Chap. IX for further information, we shall merely observe here that the above substitution of the chord of the Ninth is unnecessary and not to the point, and that, for practical purposes, a simple interpretation of the harmonic system is preferred to farfetched explanations.

Remember, when working with the diminished seventh-chord, that

The *Diminished Seventh*, the mildest of all, *requires no preparation* (see p. 62).

EXERCISES

136



These exercises, and all previous ones in this chapter, are naturally intended merely to teach the pupil to employ mechanically such chords as have been explained, and to test the given rules and observations. The awkwardness and stiffness of their construction is due more especially to the fact that the very numerous seventh-chords can, for the present, appear only in the root-position, and that the introduction of many of them — considering our present standpoint, which does not permit of a choice of methods — was difficult and must necessarily seem forced.

Let us explain the exercises in further detail.

The root of each seventh-chord always makes the cadencing leap of a fourth or a fifth, as the leading of the bass plainly shows; only in No. **127,** Ex. 3, and No. **136,** Ex. 3, we shall find apparent exceptions. In the former, in meas. 4, the bass tone does remain stationary; nevertheless, in both chords, the progression of the root is quite according to rule: a_7–D_7. It was possible to hold the bass tone here, because we have already learned about the transformations of the dominant seventh-chord, and are therefore able to use them. The same thing occurs in No. **136,** Ex. 3, meas. 5, where the root-tone progression A_7–d takes place over a stationary bass.

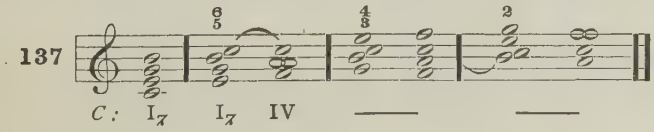
In No. **136,** Ex. 2, the seventh-chord on the *third degree in minor* is employed. Thus introduced, we may assume that it will not have an unnatural and harsh effect.

CHAPTER VII

Inversions of the Secondary Seventh-Chords

From the inversion of the secondary seventh-chords the same derivative chords will naturally result as were shown before in the case of the dominant seventh-chord; namely, the chords of the Fifth and Sixth, the Third, Fourth and Sixth, and the Second.

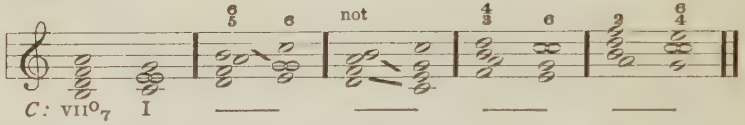
The differences in the Thirds, Fifths and Sevenths of the fundamental chords will make no difference in the treatment of the inversions; for, although the major Seventh becomes a minor Second on inversion, and the diminished Seventh an augmented Second (see pp. 6, 7), the progression of both will be effected in the manner previously explained.



No new rule is needed for the progressions of all these seventh-chords. As noted above, the chord on the seventh degree in major and minor should be handled somewhat cautiously, owing to the open Fifths which may easily result. A few more remarks on its treatment are now in order.

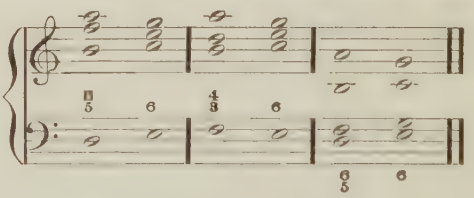
The progressions of the seventh-chord on the seventh degree in major are as follows:

138



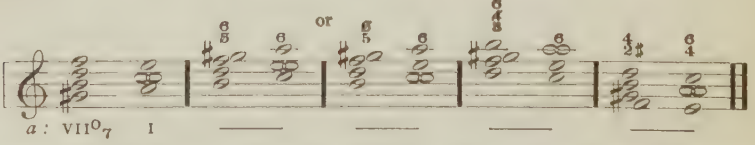
All these inversions of the chord may be used; only the last (the chord of the Second) will probably be least often employed, as its resolution to the chord of the Fourth and Sixth can seldom be utilized, and then only as a "passing" chord.

Do not be led into misjudging the usefulness of these chords by the crowded position shown in No. 138; the important point, as we have said before, is only whether the Seventh lies above or below the root (see p. 59); and positions of the $\frac{6}{5}$ and $\frac{4}{3}$ chords like the following:

139

sound better for the reason that the Seventh is above the root.

The diminished chord of the Seventh is resolved similarly. For illustration:

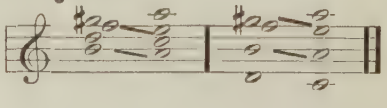
140



Here the third inversion, the Chord of the Second, will again be used the least, as is shown by its unsatisfactory resolution to the $\frac{6}{4}$ chord — a chord which invariably requires careful handling (see p. 148, etc.).

As already observed (on p. 66), parallel Fifths resulting as below from the resolution of the $\frac{6}{5}$ or $\frac{6}{3}$ chord:

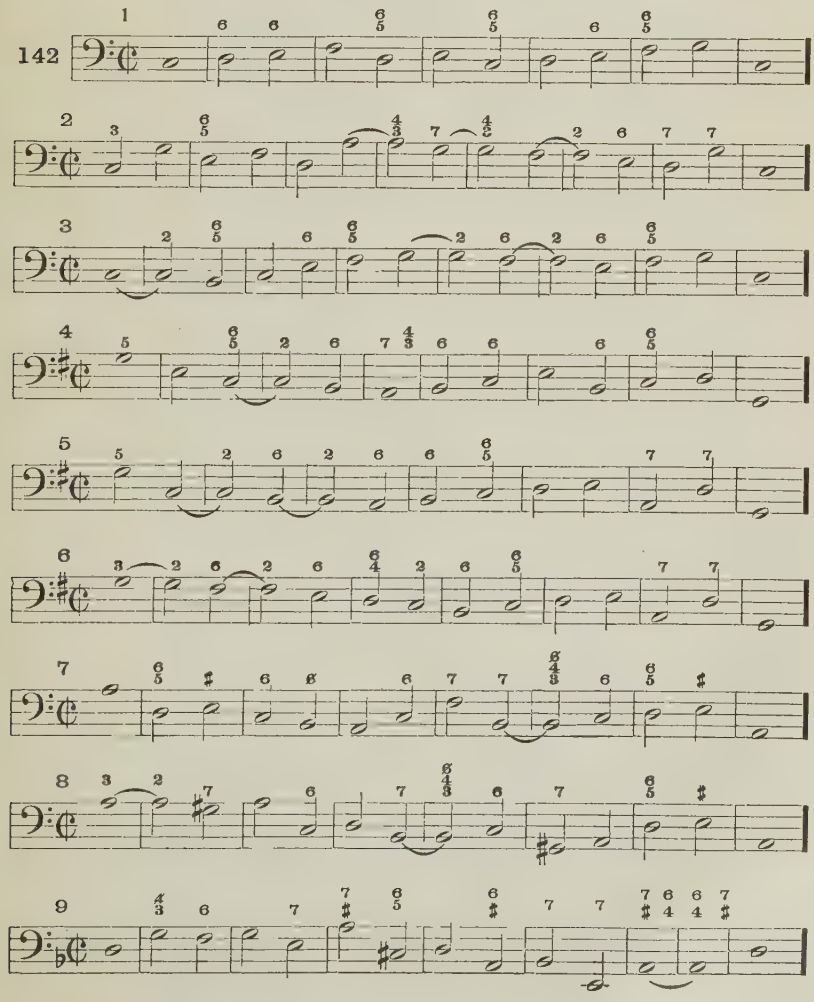
141



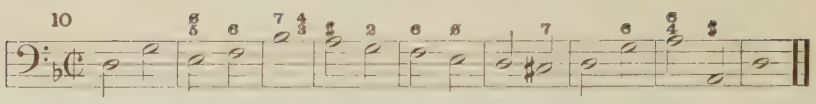
must be regarded as incorrect. Concerning the results of such Fifths consult Nos. **16, 17** and **18,** on p. 17.

In this extremely pliant chord the relative positions of root and Seventh do not produce such an essentially different effect as in the case of the chord on the seventh degree in major. Whether the Seventh lies above or below the root, the similarity in sound between the augmented Second and the minor Third always lends the chord a mild quality; and *this* augmented Second will be felt as such only as it influences the tonality.

EXERCISES



10



NOTE. — In Ex. 9, meas. 4, the Seventh is held over, which is wholly admissible, this being only an inversion of the same chord. Concerning the holding over of the Seventh, see next chapter.

CHAPTER VIII

Chords of the Seventh in Connection with Chords on Various Other Degrees than Those Heretofore Used. Deceptive Cadences

The familiar rule that the Seventh must move a step *downward* on resolution, holds good in all chord-connections hitherto shown. But this rule has as little *positive* authority as other statements which, under different conditions and circumstances, and in view of the vast variety of possible chord-connections, are subject to necessary changes and deviations.

Respecting the progression of the Seventh or its inversion, the Second, everything depends on how the root moves. Wherever the root progresses (as in all the foregoing examples) so that no intelligible and satisfactory resolution would result unless the Seventh moved downward by a step, the rule just cited will hold good.

But the progression of the root may directly counteract the tendency of the Seventh, which can then either be *held over*, or be *led upward*. For illustration:

143

Thus it becomes practicable to connect the seventh-chords with chords on *other* degrees than those so far employed. A few common forms of such chord-connections, with running comments, are subjoined, so that when we attempt new combinations of this sort we may proceed according to logical principles.

Let us begin with the dominant chord of the Seventh.

As mentioned before, the resolution of seventh-chords as hitherto conducted is called a Cadence, and that of the dominant seventh-chord **a Closing Cadence.**

Where the dominant seventh-chord is followed by some other chord than the tonic triad, which forms the closing cadence, the natural tendency to a close will either be delayed or wholly annulled. One's expectation of the usual succession being thus deceived, such chord-connections are termed

Deceptive Cadences.

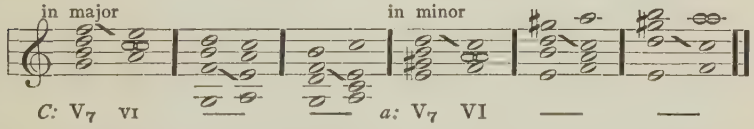
Hence, a deceptive cadence always occurs when the progression of the dominant seventh-chord leads, not into the tonic triad, but to other chords.

Some forms of these cadences shall now be explained.

(1) *The connection of the dominant seventh-chords with triads other than the tonic triad, when the Seventh moves a step downward.*

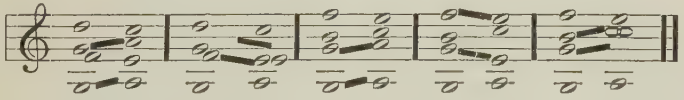
(*a*) Connection with the sixth degree.

144



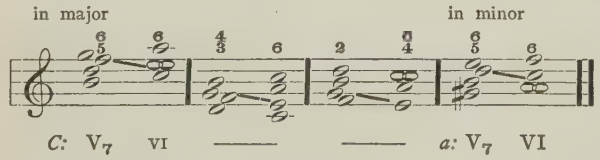
This progression (deceptive cadence) occurs very frequently. One should always look out that the root of the dominant seventh-chord is not doubled; for otherwise it will be difficult, even quite impossible, to exhibit the connection correctly:

145



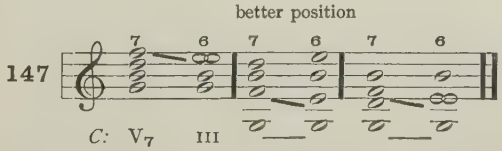
With inversions of the seventh-chord this progression is not so decided in effect, and therefore seldomer:

146



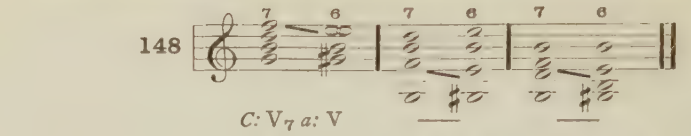
(*b*) Connection with the third degree.

147

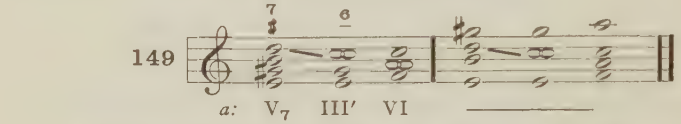


NOTE. — Further experiments with the inversions of the chord will be omitted; the student may try them unaided.

This progression is more decisive when modulation is employed:

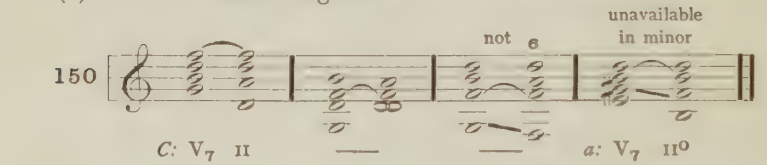


The connection with the triad on the *third* degree in minor is also practicable; only this triad, being dissonant (from the augmented Fifth) makes a further progression necessary.

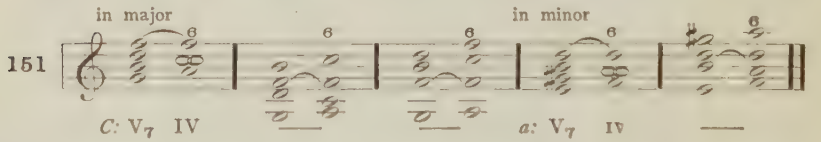


(2) *Connection with triads when the Seventh is held over.*

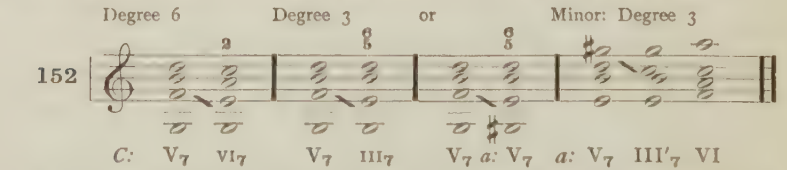
(*a*) With the second degree:



(*b*) With the fourth degree:

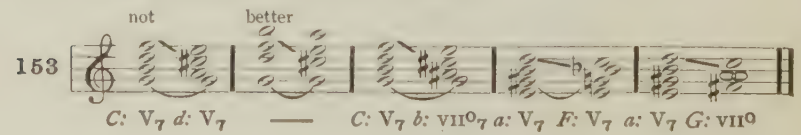


Connections of the dominant seventh-chord with seventh-chords on degrees not yet employed, are also practicable. Here are a few:



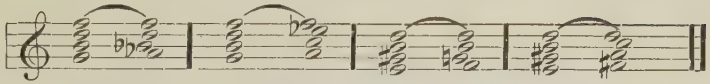
By modulating into other keys, the possibility of new combinations is greatly enlarged; for illustration:

(*a*) When the Seventh moves downward:



(*b*) When the Seventh is held over:

154



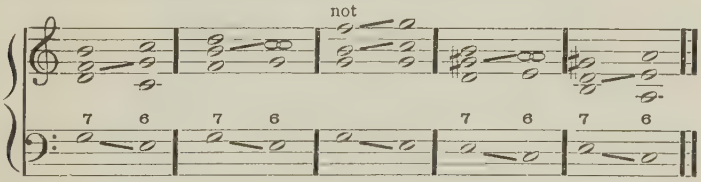
C: V_7 *E♭:* V_7 *C:* V_7 *B♭:* V_7 *a:* V_7 *C:* V_7 *a:* V_7 *G:* V_7

(3) *Connection of the chords by the upward progression of the Seventh.*

This case can occur even in the ordinary cadence V_7–I, and similarly in other progressions of seventh-chords (such as II_7–V).

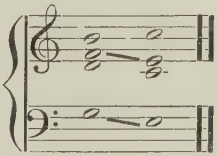
(*a*) By interchanging the progressions of various parts:

155



The bass leap of a Third renders the upward step of the Seventh impossible; for the resulting covered octave

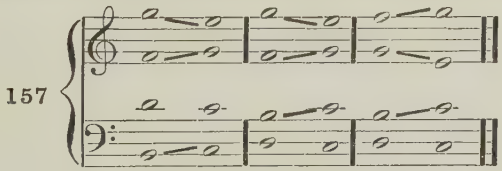
156



is entirely incorrect.

This progression of the root should not be imitated in the other parts.

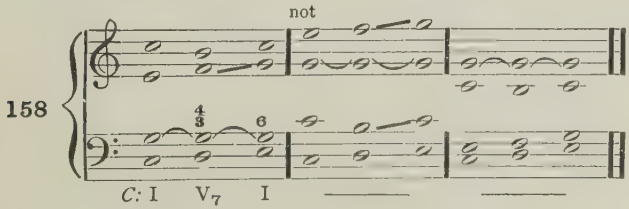
157



All the above examples are incorrect.

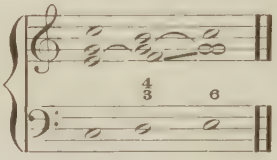
(*b*) When the root is held over:

158

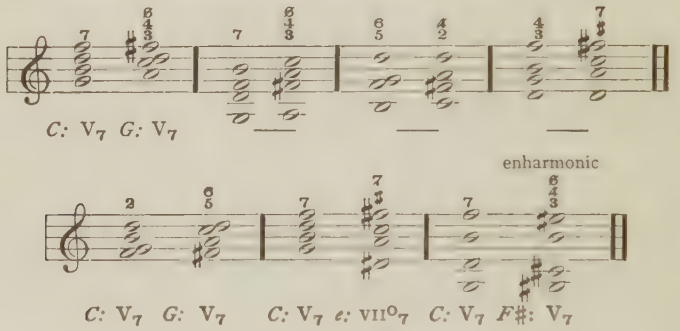


Here the root (*G*) operates as a so-called "sustained" part. (Compare "Organ-point," further on.) But it must lie at a distance from the Seventh; a progression like the following would be questionable:

159

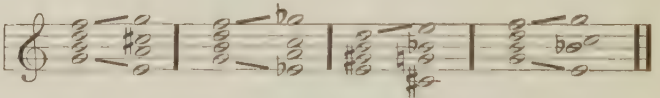


(*c*) By chromatic alteration and with modulation:

160

C: V_7 *G:* V_7 *C:* V_7 *e:* VII^{o}_7 *C:* V_7 *F♯:* V_7

(*d*) By contrary motion in the bass, with modulation into other keys:

161



C: V_7 *d:* V *C:* V_7 *b♭:* VII^{o}_7 *a:* V $_7$ *d:* VII^{o}_7 *C:* V_7 *F:* V_7

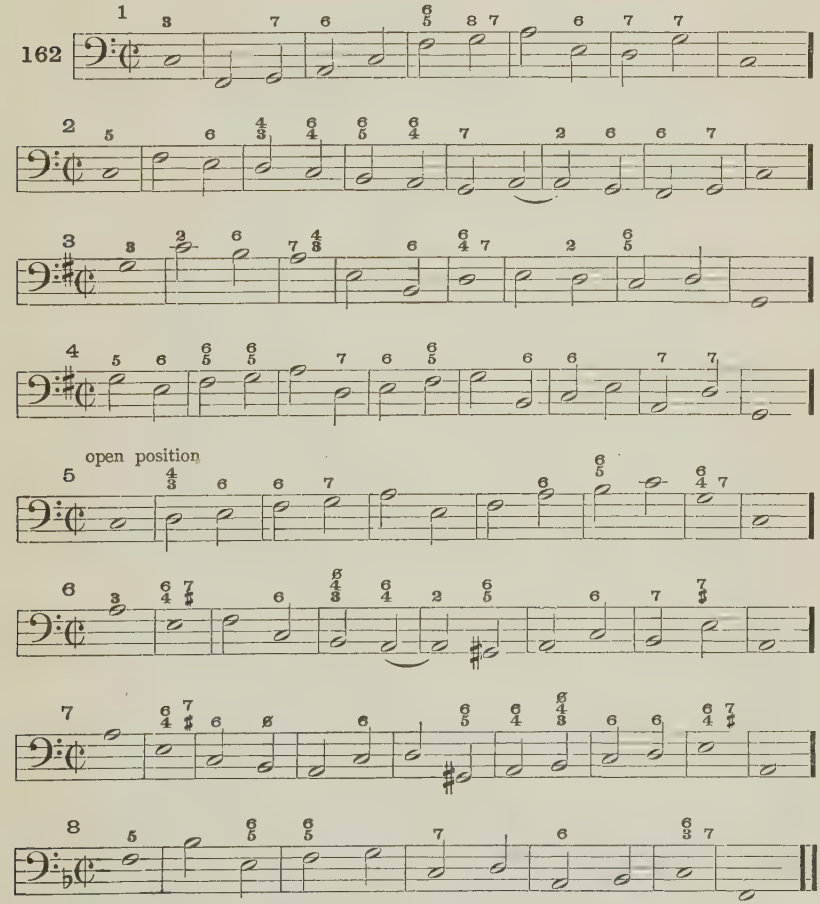
In the foregoing examples of diverse chord-connections we have given a mere suggestion of possible combinations. Their aim is to call attention to the wide range of variety in harmonic progressions. This is the proper field for speculation concerning new harmonic combinations, wherein we now witness the growth of so much that is admirable — or the reverse.

Criticism can estimate the value of such chord-combinations only in concrete instances; for their correctness or incorrectness can be determined only when their introduction, their progression, their rhythmical weight — in short, their position and environment as a whole — are submitted for inspection.

The individual style of a composition, or the peculiar part-leading brought about by the employment of a motive or musical idea, or some other factor, may lead to such harmonic combinations; but to employ

them with the speculative purpose of exploiting new and strange forms and harmonies, or in order to appear "original," can hardly ever be so successful as to conceal the intention.

EXERCISES



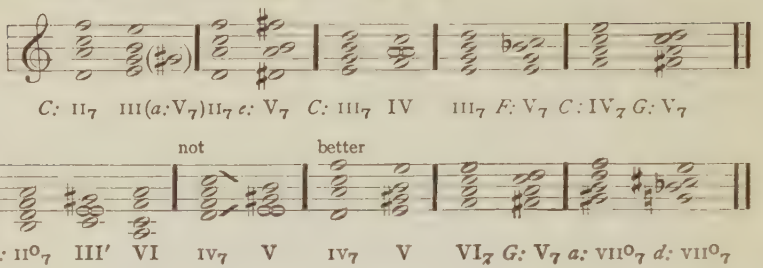
NOTE. — The open position in Ex. 4 has reference to a part-leading shown on p. 73; it may be abandoned further on.

SECONDARY SEVENTH-CHORDS CONNECTED WITH CHORDS ON OTHER DEGREES OR IN OTHER KEYS

Below are given a few more chord-connections with secondary seventh-chords. To cite every case of this kind would be equally impossible and unpractical.

(*a*) When the Seventh progresses regularly.

163

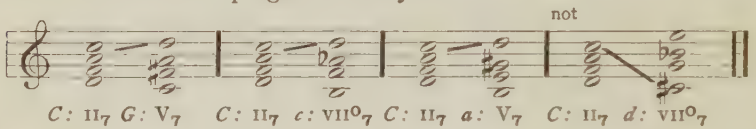


C: II$_7$ III(*a:* V$_7$)II$_7$ *c:* V$_7$ *C:* III$_7$ IV III$_7$ *F:* V$_7$ *C:* IV$_7$ *G:* V$_7$

a: II$^{o}_{7}$ III′ VI IV$_7$ V IV$_7$ V VI$_7$ *G:* V$_7$ *a:* VII$^{o}_{7}$ *d:* VII$^{o}_{7}$

(*b*) When the Seventh progresses freely.

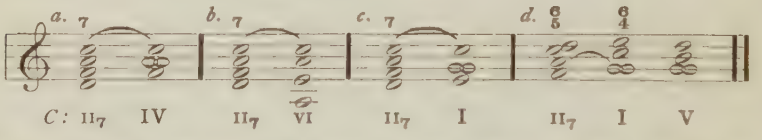
164



C: II$_7$ *G:* V$_7$ *C:* II$_7$ *c:* VII$^{o}_{7}$ *C:* II$_7$ *a:* V$_7$ *C:* II$_7$ *d:* VII$^{o}_{7}$

The reason for the incorrectness of the last example is found in the so-called "cross-relation" (inharmonic relation) between *c* and *c*♯; this will be explained later (see No. **407**).

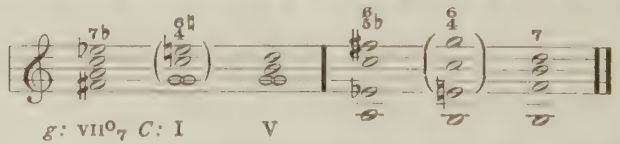
(*c*) When the Seventh is held over.

165

C: II$_7$ IV II$_7$ VI II$_7$ I II$_7$ I V

The last series of chords is much used. It operates to delay the cadencing progression of the second degree to the fifth, by means of the inserted $\frac{6}{4}$ chord of the tonic triad. The tonic chord of the Sixth is likewise not infrequently interposed in the resolution of this chord, as in Ex. **c**.

The diminished seventh-chord is often employed in like manner:

166



g: VII$^{o}_{7}$ *C:* I V

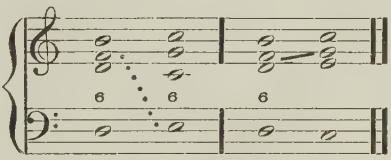
As before, the natural progression is merely put off by the chord of the Fourth and Sixth.

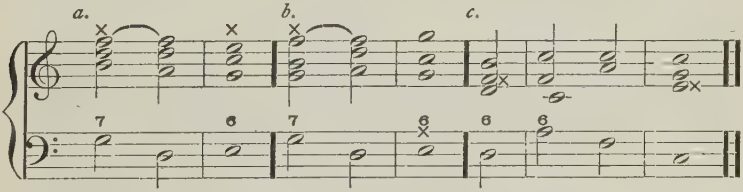
NOTE. — It would lead too far, were we to take up the matter of the notation of the diminished seventh-chord in this case, or to examine the different views on the way in which this progression is brought about (whereby the *c*♭ is transformed into *d*♯); I consider the above explanation the right one.

The mechanical combination of series of chords like these may be left to the student's own researches and experiments. Their value lies in the insight so gained into harmonic conditions and relations, and is not so slight as might appear at first glance; we may say that it stands in much the same relation to actual composition, as technical studies and preliminary exercises have to the practical execution and performance of musical works. Both render one ready and skillful, develop capabilities, and make intellectual production possible.

Here we shall only add, that the relation of the Seventh to the root, and its progression, must be taken as the final test in all the said mechanical combinations. When this progression is pure, and the leading of the other parts exhibits none of the above-mentioned defects, the given combination will be available in special situations.

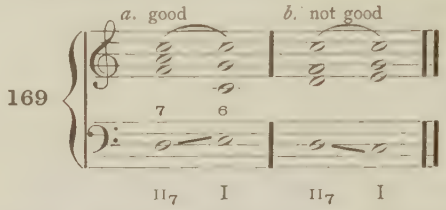
NOTE. — For the rest we should, theoretically, adhere to the rule that every dissonance *must be resolved*, and, with regard to the Seventh (above the root) and the diminished Fifth, that the resolution should proceed *by a step downward*. The diminished Fifth apparently forms an exception, being often led upward:

167

but this happens only where it appears as an augmented Fourth; moreover, the regular resolution is actually effected (precisely as it was in the case of the Seventh, in the examples given in No. 155), only it is brought about by another part. Now, with respect to the cases in which either the Seventh or the diminished Fifth is held over, observe that the resolution is generally *only delayed*, and is carried out later:

168

Here the harmonies lying between the dominant (or diminished) seventh-chord and the tonic triad are merely interpolated chords which do not disturb the natural resolution at all, although the resolution is effected somewhat later or in some other part (as in examples **b** and **c**). Combinations in which this subsequent resolution is not carried out, are rare, can hardly be effected without the assistance of modulation, and are more or less constrained or forced.

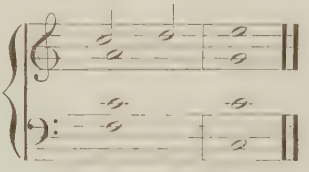
Attention is further called to the distinction between the *super*-Seventh and the *sub*-Seventh. In the following chord-connections

169



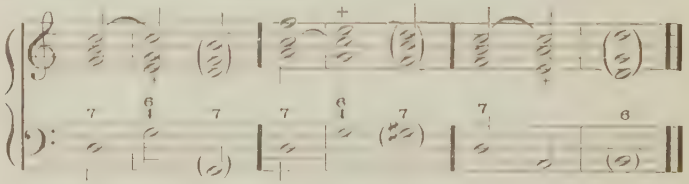
it is not, strictly speaking, the seventh-chord on *d* which is represented, although one is apt to think so, but the triad *F–A–C* with the sub-Seventh *d*. Therefore, the dissonant tone is not *c*, but *d*. This sub-Seventh has a tendency to resolve upward, just the opposite of the super-Seventh. Downward resolutions, such as No. 169b, are not to be commended. The significance of this tone as sub-Seventh is strikingly apparent in the following closing formula:

170



This is evidently a Plagal Close intensified in effect by the introduction of the sub-Seventh. (In the dominant chord, of course, even in cases where we should consider the lower tone to be a sub-Seventh, the higher tone will retain its significance as a dissonance, because it becomes a diminished Fifth.) Even where the lower tone progresses by a leap, its character as the dissonant tone must be recognized when the super-Seventh is held over. For example:

171

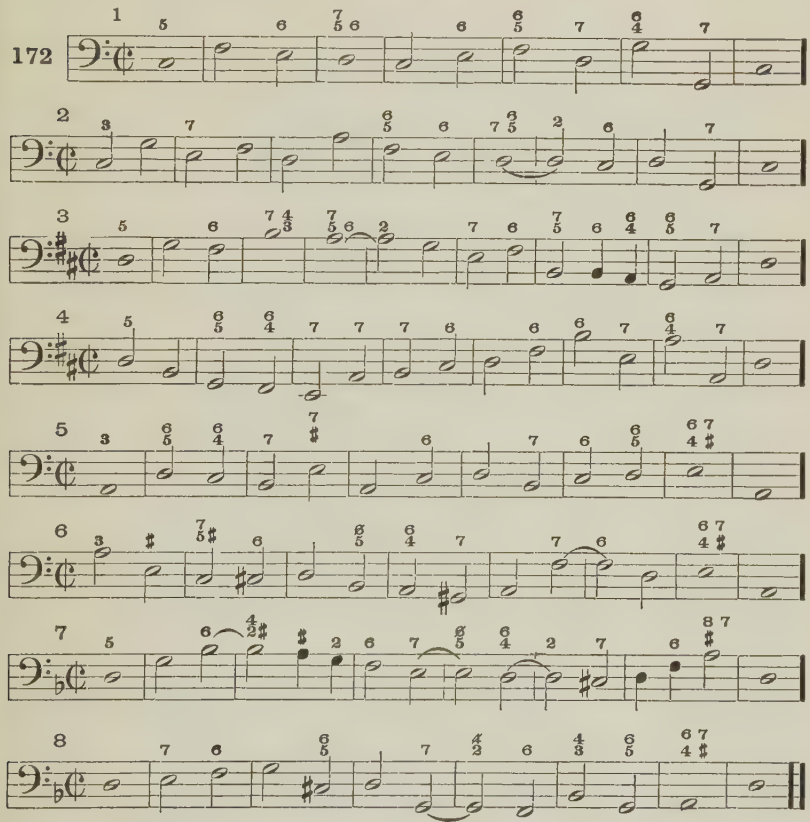


Here, just as in the examples presented in No. 155, there is an interchanging of parts; the resolution is carried out, *but not in the same part*. We shall then expect a subsequent resolution of the super-Seventh in the way shown above. In practice the distinction between sub-Seventh and super-Seventh is of no importance. The rule that the Seventh is either resolved or (when it is the common tone) held over, is the best for our present purpose, being concise and easily understood, and better adapted for obtaining practical results. But we could not neglect to call the at-

tention of advanced and thoughtful students to this distinction, that they may follow their natural inclination to get at the heart of the matter through further reflection.

EXERCISES

172



NOTE. — Some of the above-mentioned cases could not be illustrated in these exercises, being founded on Modulation, which will not be explained until Chap. XI. (In Exercise 6 a modulation is applied.) And some of the exercises might have been made smoother, less awkward and strange-sounding, had modulation been employed.

CHAPTER IX

Chords of the Ninth, Eleventh, and Thirteenth

In most text-books may be found lengthy disquisitions on these chord-forms. All the various opinions advanced concerning them lead to the same practical result. It may be assumed

(1) Either, that these combinations of intervals are to be regarded as *real chords*, like the seventh-chord, for instance, and treated accordingly;

(2) Or, that these formations, being *unessential chord-combinations*, are to be classed as Suspensions, or that they arise *accidentally* from the holding over of a part.

In the former case a long explanation of their employment is required, especially as regards their inversions; and it still remains easy to mistake them for other chords, because, in four-part harmony, some interval or intervals must be omitted.

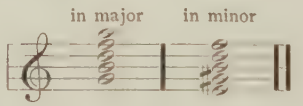
In the latter case their explanation is greatly simplified.

NOTE. — The chords of the Ninth, Eleventh and Thirteenth are a relic of the old thorough-bass method, which taught that any combination of tones, however accidental, was an individual chord-form, and gave rules for its treatment without systematically classifying the numerous accidental chord-formations. This made the entire system of harmony both diffuse and difficult to learn.

The possible simplification of method in harmony-teaching, without any really practical disadvantages, inclines us to accept the second alternative. For the present we shall not enter into details concerning the theoretical reasons for classifying such combinations among the accidental chord-formations. More on this head in Part II.

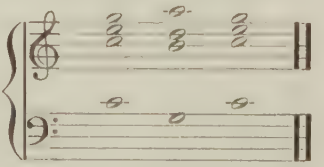
Still, for the sake of clear insight, the construction of these unessential chords shall be exhibited, with explanatory observations.

By adding a Ninth to the dominant seventh-chord we obtain a chord called the *dominant ninth-chord*.

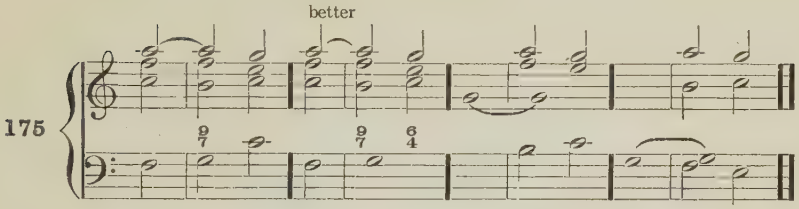
173

It has a *major* Ninth in major, and a *minor* Ninth in minor.

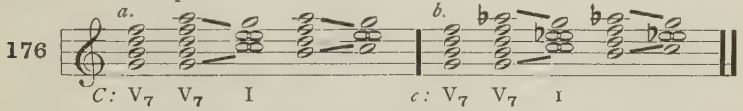
In pure harmony this chord is used, like the dominant seventh-chord itself under similar circumstances, when either the Ninth or the root is prepared. Cases of the following kind, where *both* tones enter freely:

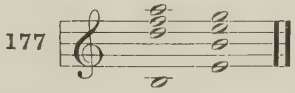
174



are censurable because of their stiffness and lack of connection.

Preparation may be effected as follows:

Why the first two examples may be classified among the suspensions, and the other two among other accidental chord-formations, will be explained in Part II.

NOTE. — From the ninth-chord in major certain theorists derive the seventh-chord on the seventh degree (treated in detail above), and from the ninth-chord in minor the diminished seventh-chord, to enable them to carry out their cadencing progression in the same way as the other seventh-chords. They reason thus: "These chords are properly dominant seventh-chords, a Ninth being added and the root omitted." For example:

Here the confusion commences (in 176a) by having to assume that there are *two* chords on the seventh degree in major; the first with the following natural cadence:

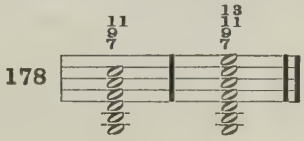


the other a derivative chord of the dominant seventh-chord; — whereas it is much simpler to refer to the character of the leading-tone, upon which these two chords are based.

Many musical text-books still further complicate the explanation of various harmonic forms by assuming that there are also *secondary ninth-chords.* This is equally unnecessary, for none of these tones can be employed without preparation, so that in treatment and progression they in no way differ from suspensions.

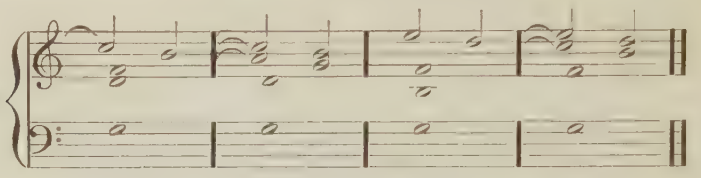
Whatever applies, either in practice or simplified theory, to ninth-chords, will be even more fully applicable to chords of the Eleventh and Thirteenth.

In their complete form, these strange-looking chords appear as below:



In this shape they can, of course, never be used in pure four-part harmony, the necessary omission of several intervals making them appear in the form of simple suspensions:

179



Even where more than four parts are present, these chords cannot be distinguished in character from suspensions; and in the freer style, where they enter unprepared, the parts so entering may be regarded as changing-notes. (Further details in Chap. XII.)

CHAPTER X

Chromatic Alteration of the Fundamental Harmonies
Altered Chords

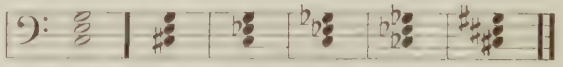
Chromatic alteration of one or more intervals in the fundamental harmonies has a twofold effect; it either

(1) Brings about a modulation, or

(2) Gives the chord a new form not yet employed by us.

Supposing the major triad, for instance, to be thus altered, there will result:

(*a*) *Modulations:*

180

Through *c*♯, the diminished triad on the seventh degree in *D* major or *d* minor, or on the second degree in *b* minor.

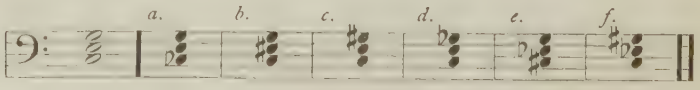
Through *e*♭, the *c*-minor triad.

Through *e*♭ and *g*♭, the diminished triad on the seventh degree in *D*♭ major and *d*♭ minor, or on the second degree in *b*♭ minor.

The last two transformations are mere transpositions of the same major triad into other keys, namely, *C*♭ major and *C*♯ major.

(*b*) *New Formations:*

181



Of these, the forms under **a**, **b**, **d** and **f** can easily result accidentally from passing-tones, but cannot be considered as harmonic entities (chords having established positions and distinctive names).

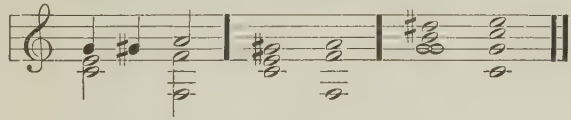
The forms given under **c** and **e**, on the contrary, are true chords. The former is known under the name of

the augmented triad,

found on the third degree in minor (see p. 31), but, as noted before, it seldom appears in this position, occurring oftener as the triad on the first degree in major with chromatically raised Fifth.

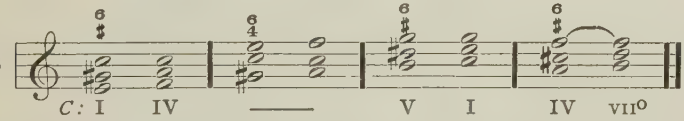
This form may be readily explained as arising from the passing-note *g*♯ leading over from *g* to the following note *a;* just as its progression is determined by this same *g*♯ as an augmented interval.

182



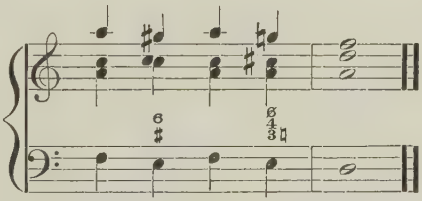
The inversions of this chord are likewise usable:

183



Although these chords generally occur as passing-chords, or by means of preparing the augmented Fifth, they may enter freely among swiftly changing harmonies:

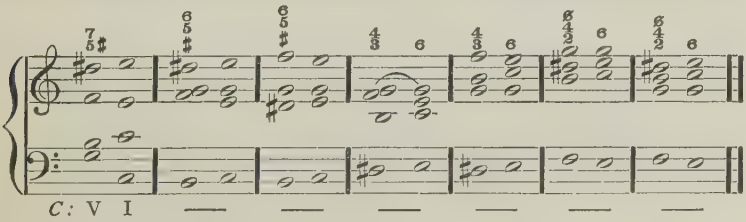
184



To the augmented triad we may add not only the dominant Seventh (as occurs most frequently), but also the major Seventh of either the first degree or the fourth.

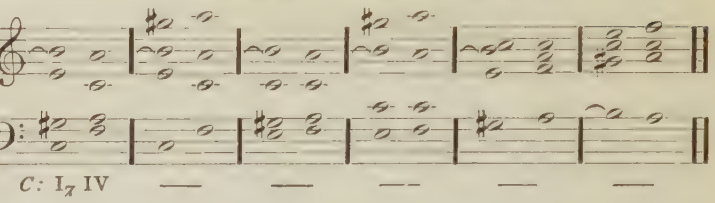
(*a*) The augmented triad in connection with the dominant Seventh:

185



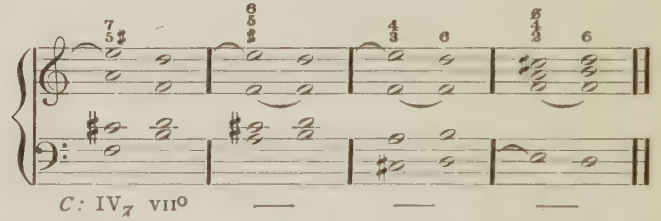
(*b*) In connection with the Seventh of the first degree:

186

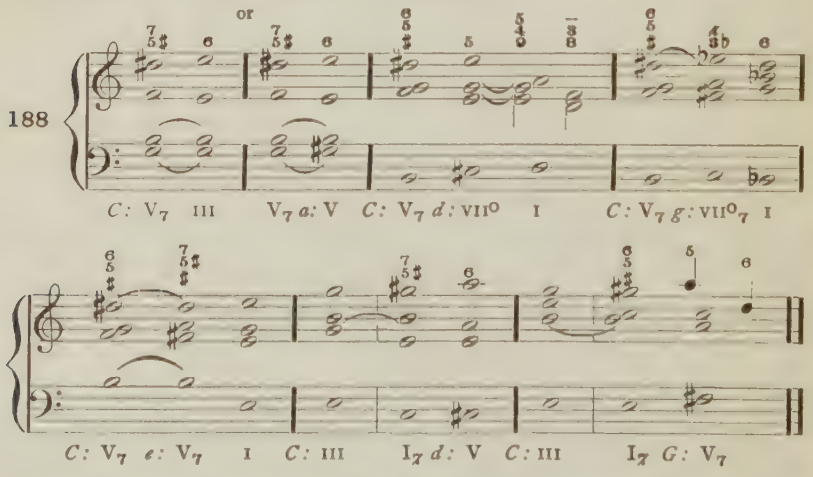


(*c*) In connection with the Seventh of the fourth degree (this rarely occurs):

187



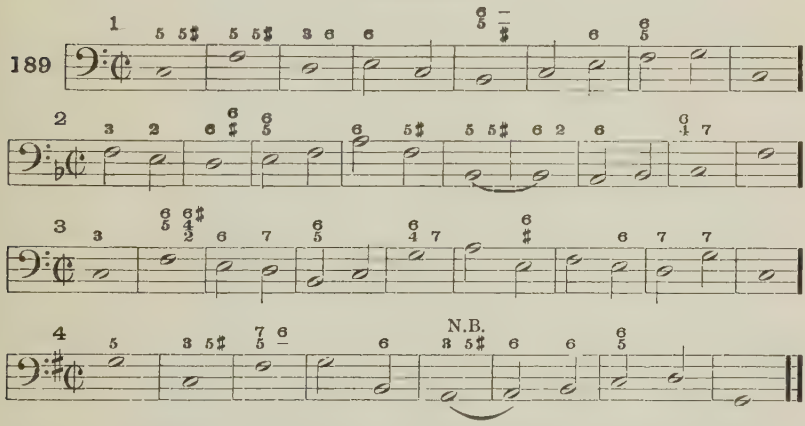
In all these chord-connections, we have hitherto employed the cadencing bass progression (V–I, I–IV, etc.); a few examples will prove, however, that the chords so treated may be combined with chords on other degrees and with a different bass progression.

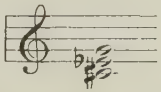
188

These harmonic connections, some of them rather harsh, acquire significance only from the position they may assume, more especially when some natural necessity leads them into it.

While it is the business of a text-book to call attention to the possibility of such harmonic formations, it is our duty to warn the beginner

against overestimating the value of such stimulants, and, in general, to advise him to abstain from intentionally employing any unusual harmonic resources before he is thoroughly familiar with the treatment of the simplest harmonies as employed in pure part-writing. Too early occupation with harmonic novelties, and premeditation of peculiar effects, will make it difficult, or even impossible, to obtain a clear view of and insight into the simple basic features of harmony, and divert the mind from essentials to matters of secondary importance.

EXERCISES

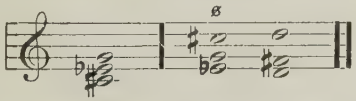
189

NOTE. — In Exercise 4 the augmented Fifth is brought in (at N.B.) as a member of the minor triad on the second degree, which does not sound unnatural in this connection. This corresponds to the form given in No. 181f. From this we may see that various new chord-formations may be obtained by the aid of natural part-leading. The question, whether this raised Fifth, *e*♯, might not just as well be written *f*, might possibly afford occasion for argument.

From the form under **e**, in No. 181  (to which the name of "double-diminished triad" has been applied), there arises a harmony which is often used, namely,

the augmented Chord of the Sixth.

It results from the first inversion of the above chord:

190



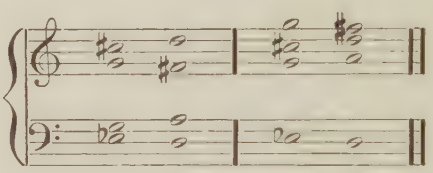
According to its progression, which is determined by the augmented Sixth, in this instance *e*♭–*c*♯, the root-chord belongs to *g* minor; and so the triad on the fourth degree (*c*) passes over, through its raised root (*c*♯), to the fifth degree.

Wherever this chord appears with its natural progression, as shown in No. 190, the last chord proves to be the dominant. The proof of this will be manifested in certain harmonies which are formed like the augmented chord of the Sixth — the augmented chord of the Third and Fourth, and the augmented chord of the Fifth and Sixth. Their explanation follows later.

NOTE. — The relation which the augmented chord of the Sixth bears to these other chords shows that it is derived from the same source.

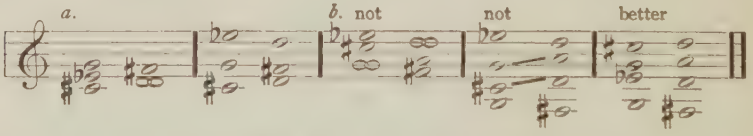
The augmented chord of the Sixth has the peculiarity that, in four-part harmony, only its Third (*i.e.*, the Fifth of the root-chord) can be doubled:

191



Of the remaining positions of the root-chord (the so-called double-diminished triad) the fundamental position may be used in three-part harmony, but is rare, and the second inversion in four-part harmony, but only in very open position.

192



NOTE. — The chromatic alteration of an interval of the minor triad was previously exhibited in the forms under Nos. 180 and 181, and therefore requires no further investigation. Similarly, the chromatic alteration of an interval in the diminished triad will result either in a major or minor triad, or in some form already shown under the numbers mentioned above.

Hence, the formation of the triad at No. 181d will be like that of the one following in *C* major:

193

In some text-books this chord is called the "hartverminderter" triad. ("Major-diminished" triad; presumably because of the major Third. —TRANSLATOR'S NOTE.)

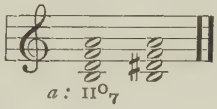
Such "chords," if one may call them so, generally occur only in the form of passing-chords, and their progress is governed by the nature of their intervals; that is, augmented intervals proceed upward by a step, and diminished intervals downward.

The chromatic alteration of an interval in the seventh-chord has already been touched upon (where a Seventh was added to a chromatically altered triad; see p. 84), in the case of the augmented triad.

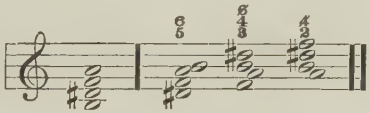
Among the other secondary seventh-chords, the chromatic alteration of one, in particular, assumes importance. This is the *seventh-chord on the second degree in minor*, which, in the following form, yields chord-forms very often employed.

The chromatic raising of its Third:

194



yields the inversions

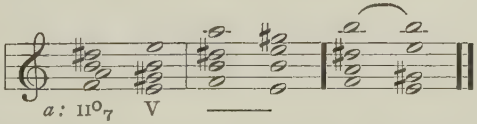
195

Of these inversions, the *second* is the most important, and is much used; the remainder are rare.

The chord produced by the second inversion is called

the augmented chord of the Third, Fourth and Sixth.

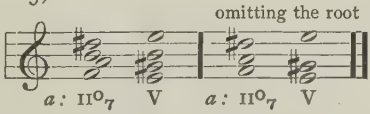
Its progression is based on that of the root-chord; that is, as the seventh-chord on the second degree leads by the usual cadencing progression into the dominant, its second inversion will progress similarly.

196



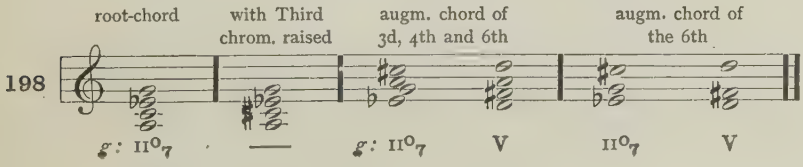
By omitting the root of this chord, we get the *augmented chord of the Sixth* previously obtained, whose progression into the dominant chord is thus explained (see p. 85):

197



or in *g* minor, to compare it with No. 190:

198



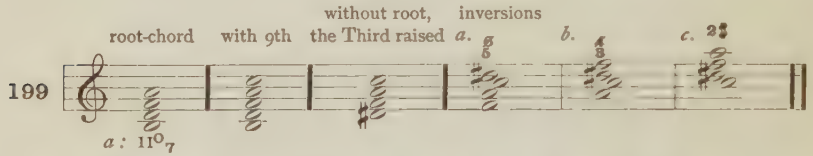
NOTE. — Here we may mention, in passing, that this augmented chord of the Third, Fourth and Sixth may be exhibited by adding a Seventh to the "major-diminished" triad noticed on page 86.

It is quite evident that its resolution may then become different, namely, *c*: VII$^{9}_{7}$ I; whereas the same chord in *a* minor would naturally lead into the dominant.

To this chord we may also add the Ninth of the root-chord; but then the root will be omitted in practical work (see Chap. IX, p. 81). From this addition and subtraction results

the augmented Chord of the Fifth and Sixth,

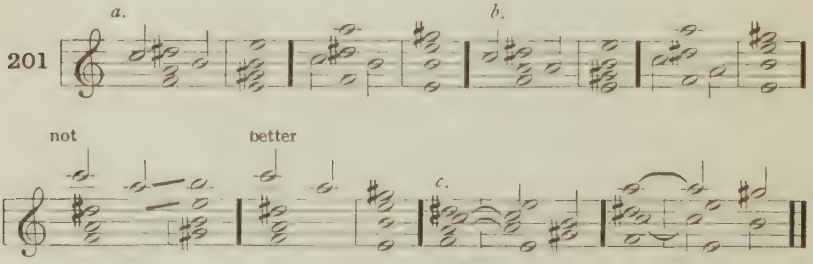
whose derivation is, consequently, as given below:



Of these chords, the augmented chord of the Fifth and Sixth (the raised Third being here assumed as the root) given under **a** is the most usable; the rest are uncommon.

Its natural progression would be direct to the dominant; but this always produces parallel Fifths:

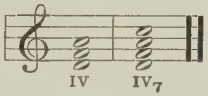
These parallel Fifths, which are not the worst of their kind, may be avoided either by an earlier resolution of the Fifth (the original Ninth mentioned above, as a suspension), as at No. 201a; or by a leap of the Fifth to the Third (**b**), which produces an augmented chord of the Sixth; or (and most frequently) by holding over the Third and Fifth while the Sixth and the bass tone progress, so that the $^{6}_{4}$ chord, which here takes on the character of a suspension (**c**), is interpolated before the resolution.



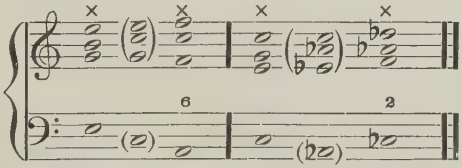
NOTE. — The addition of the Ninth does not justify us in calling this harmony a ninth-chord; here the Ninth bears the character of a suspension, as it does everywhere else, which is very apparent from the progression under **a**. Similarly, the progressions at **b** and **c** correspond perfectly to the treatment of suspensions, these Fifths likewise requiring preparation.

From this it would follow that this harmony should not have been taken up till we reach Suspensions; but it had to be mentioned here, because of its intimate relation to the two chords previously discussed, and because we did not wish to oppose the generally received *terminology* by airing the view expressed above.

Moreover, it cannot be denied that the derivation and explanation of these three augmented-sixth chords, as given above, exhibit certain features which are apparently forced and artificial. Beginners cannot get it through their heads that in the augmented Chords of the Sixth and the Fifth and Sixth the fundamental tone is a tone which does *not* appear at all! (With the augmented chord of the Third, Fourth and Sixth the matter is quite simple.) Consequently, many are inclined to derive the two chords from the fourth degree in minor, assuming the following fundamental harmony:

202

imagining the *root* to be chromatically raised, and the harmonies in question to be the result of inversion, the inversions of course retaining the degree-letterings IV and IV_7 respectively. But the seven degrees of a key, in so far as they serve as *root-tones*, cannot be altered at all — not taking into account the familiar fact that the seventh degree in minor may be either a minor or a major Seventh; on the other hand, with the Fifth (as we have already seen), and more rarely with the Third, a change of this sort may be effected without necessarily endangering the essential character of the key. *But the main reason for considering the augmented Sixth to be the Third of the original root, is found in its progression.* It resolves to the fundamental tone of the dominant triad; at least, such is usually the case, although other resolutions may occur, some of which, however, trespass on the domain of Modulation. Still, the resolution itself is accomplished through the upward progression of the augmented Sixth by the step of *a minor Second. Now, this mode of progression is chiefly characteristic of the major Third;* it is very rarely adopted by the root (unless it happens to be the leading-tone), and only in cases where it has, so to speak, the significance of a major Third, and frequently only with the aid of modulation:

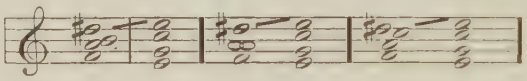
203



Furthermore, both the augmented chord of the Sixth and the augmented $\frac{6}{5}$ chord resemble, *closely* as regards effect, and *exactly* as regards their resolution, the augmented $\frac{6}{4}$ chord, whose Sixth admittedly possesses the significance of a Third; in this the characteristic quality of a major Third, inherent in the augmented Sixth, is again manifested. But, this characteristic quality once admitted, nothing remains but to

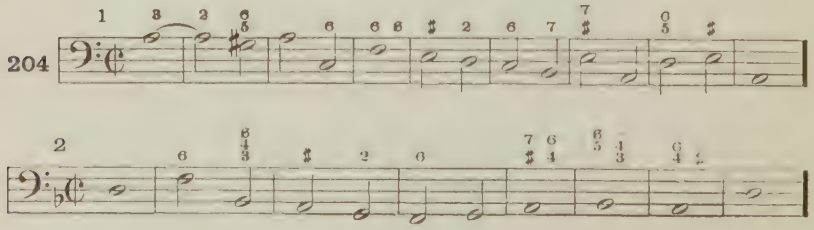
refer both harmonies to the second degree of the scale as their root, so that the chord-signature will have to be II° in every case where one of these three chords comes in question. Here we shall not neglect to draw attention to Hauptmann's theory. He proceeds from the principle that "every harmonic combination, in its outward form, represents solely the product of internal requirements; hence, in order to grasp a chord theoretically, it must never be considered as an aggregation of tones which may be arbitrarily raised and lowered, but always as only one stage in the development of the idea of organic reality" (*Natur der Harmonik und Metrik*, p. 47). The augmented Sixth, as he explains it, arises from an "overreaching" into another key-system, namely, that of the dominant. He thus invests this interval with the significance of a leading-tone, besides denying it the character of a root-tone; for he expressly states, concerning the augmented chord of the Sixth, that it *makes its leading-tone* (that is, the augmented Sixth itself) *felt decidedly as the Third of the Fifth of a dominant chord*. It is apparent that these two modes of explanation agree perfectly as to the fact at issue, that is, as to the significance of the interval in question.

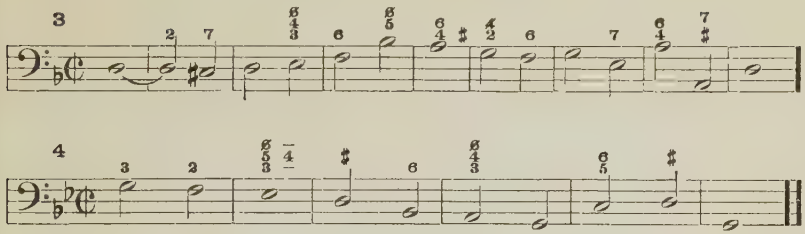
On page 88 reference was made to still further modes of resolution of the three chords containing an augmented Sixth. Below are given the most important of these resolutions:



all to the triad on the third degree formed with a perfect Fifth. But the effect shows plainly that the key-connection is not with *a* minor, but with *C* major. Hence it follows, that these three chords may also occur in major; but that their derivation must then be different, is proved by the progression of the augmented Sixth. In minor the Sixth resolves to the root of the dominant triad (a progression chiefly characteristic of the major Third, as explained on p. 89), whereas in our last examples it resolves to the major Third, a mode of resolution almost exclusively peculiar to the augmented Fifth (excepting, of course, in modulations). But if, in the above instance, we regard $d\sharp$ as an augmented Fifth, the fundamental chord is not *b–d f–a*, but the ninth-chord *G–b–d f–a*, which may be brought into accord with the view expressed in the note on p. 81. We cannot deny that the derivation of the augmented $\frac{6}{5}$ chord, in particular, will then require a still more complicated explanation than the same chord in minor. This is not the place for further speculations on this point; our aim has been merely to call attention to the internal difference between these two chords which sound alike, and to their different signification.

EXERCISES





At the end of this chapter let us once more survey the broad field of harmonic combinations which it has spread before us. We have found much which is familiar and useful, and others forms which seemed unavailable and valueless; but nothing appeared in its primitive shape, every form had received some addition, some alteration — some ornament, as it were. This forsaking of *primitive form* gives us occasion to refer once more to the observations on pp. 84–5.

It doubtless took a long time before these harmonic transformations were discovered, and still longer before they became common property; much that is still unavailable may find useful development in the future; but it is not advisable, in a striving after originality, to concentrate one's entire endeavor on such development of novel harmonic combinations or on their exaggerated employment; for such a departure from foundation-forms may well endanger the healthful harmonic core.

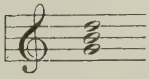
As all these combinations serve chiefly for the ornamentation and (we might say) for a more elegant development of the simple fundamental harmonic lines, they must be used with discrimination, otherwise the work of art will appear overladen, and the artist himself wanting in good taste.

At the close of our presentation of all the essential harmonies, together with the simpler modes of their employment, we shall pass them in concise review, with their varieties and derivatives.

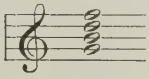
View of All Chords Belonging to a Major or Minor Key

1. Fundamental Harmonies

a. The Triad



b. The Seventh-chord



A. VARIETIES OF THE TRIAD

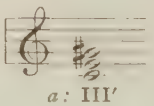
(major, minor, diminished, augmented)

Major Triads

Minor Triads

Diminished Triads

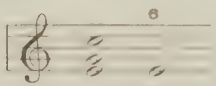
Augmented Triad of the Minor Scale



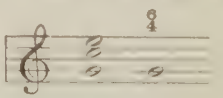
NOTE. — The remaining augmented triads will be found under II, among the Altered Chords.

Inversions of the Triad

a. Chord of the Sixth



b. Chord of the Fourth and Sixth

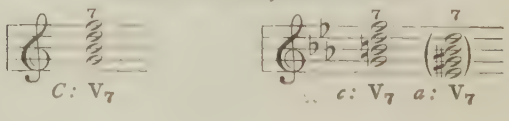


B. VARIETIES OF THE SEVENTH-CHORD

(*a*) The Dominant (or Principal) Seventh-chord.
(*b*) The Secondary Seventh-chords.

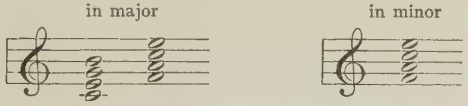
Dominant Seventh-chord

(Major triad with minor Seventh added)
formed alike in major and in minor

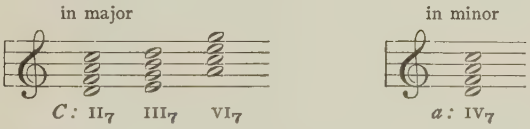


Secondary Seventh-chords

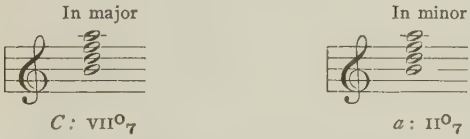
1. Major triad with major Seventh



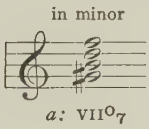
2. Minor triad with minor Seventh

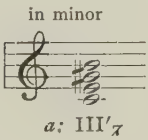


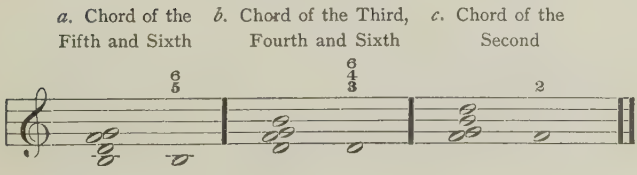
3. Diminished triad with minor Seventh



4. Diminished triad with diminished Seventh (the diminished Seventh-chord)

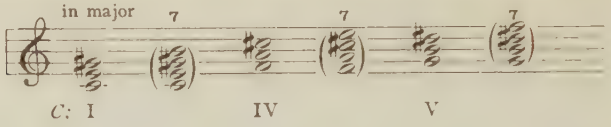


5. Augmented triad with major Seventh

Inversions of the Seventh-Chords



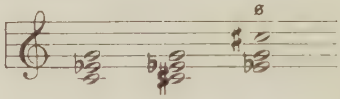
II. Altered (Chromatically Changed) Chords

(*a*) The augmented triad, derived from the major triad



(*b*) The augmented chord of the Sixth; derived

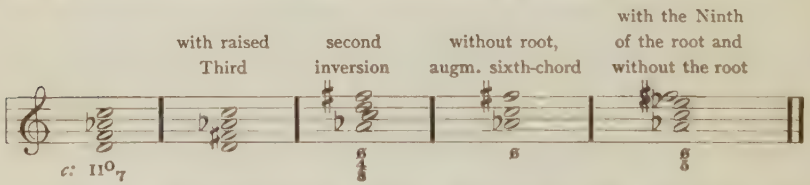
1. From the minor triad with raised root (the so-called "double-diminished" triad):



2. From the seventh-chord on the second degree in minor (compare the following chords).

(*c*) The augmented chord of the Third, Fourth and Sixth; and

(*d*) The augmented chord of the Fifth and Sixth; — both derived from the seventh-chord on the second degree in minor.



Note. — In this enumeration, as before, no account has been taken of the circumstance that the harmonies may be formed in minor in a twofold manner — with the seventh degree raised or not raised. The reason is, that chords constructed on the latter basis would, of course, correspond precisely to those of the relative major key. — The seventh-chord on the first degree in minor, with major Seventh (a–c–e–$g\sharp$), is not used (see p. 64), and was therefore not included here. In practice this chord always occurs with a minor Seventh, and agrees precisely, both in its intervals and the mode of its employment, with the seventh-chord on the sixth degree of the major key.

CHAPTER XI

On Modulation in a Piece of Music

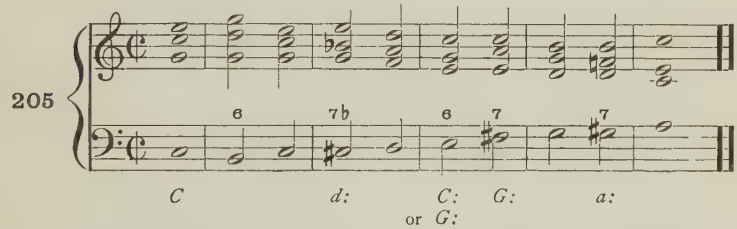
The term modulation has various meanings. Formerly it was used to express the manner in which a succession of harmonies was set to a vocal melody. Nowadays it signifies the passing over from one key into another.

First of all, the matter of prime importance is to learn how to recognize and define every modulation — passing over to a foreign key — as it occurs. Later (in Chap. XVI) we shall take up the means and resources of modulation, and thus still further increase our ability to grasp its varying phases.

A modulation ensues when a harmony enters which is foreign to the original key.

Then the original key is wholly forsaken, and the harmonies will have to be regarded as belonging to the new key until some harmony foreign to this latter enters and effects a fresh modulation.

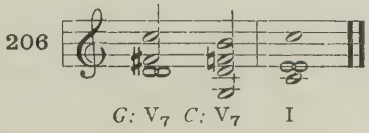
Thus, in the following example:



a modulation to *d* minor occurs in the third measure, because *c*♯–*e*–*g*–*b*♭ does not belong to *C* major, but undeniably to *d* minor; whereas, in meas. 4, it is doubtful whether the major triad on *C*, foreign to the ruling key of *d* minor, belongs to *C* major or the following *G* major. In meas. 5, however, the modulation to *a* minor is unquestionable.

Never lose sight of the fact, that the *dominant seventh-chord* and the *diminished seventh-chord* furnish the principal means of modulation.

When the dominant seventh-chord enters there may be a momentary doubt as to whether a major or a minor tonality will be the outcome, as the chord is the same in either case. But the connection in which it enters will solve the doubt. *D*–*f*♯–*a*–*c*, in connection with *G*–*b*–*d* or *e*–*g*–*b* or *C*–*e*–*g*, is *G* major; in connection with *g*–*b*♭–*d* or *E*♭–*g*–*b*♭ or *c*–*e*♭–*g*, on the other hand, it is *g* minor. Sometimes the modulation is not fully carried out, that is, after the entrance of the dominant seventh-chord a harmony appears by means of which a new modulation is effected. In such cases it is a good plan to assume the presence of the next-related key. For instance, in this example



it is doubtful whether we have to do with *G* major or *g* minor; but most probably with *G* major, because of its intimate relation to *C* major.

As to the diminished seventh-chord, its entrance immediately determines the key; for, as it occurs only on the seventh degree in minor, it will belong only to a minor key, and consequently *g♯–b–d–f*, for instance, must inevitably be set down as belonging to *a* minor. The fact that this chord very often occurs in connection with the major triad

207

a: VII°$_7$ *A:* I

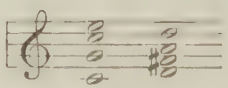
makes no difference. In such cases we must proceed as suggested above, assuming that the first chord belonged to *a* minor, and the second to *A* major; for in this connection we regard the triad *A–c♯–e* as a tonic chord, and not — as we are otherwise inclined to do — as a dominant chord (details on this head below), an opinion based on the character of the preceding chord, which evidently contains the leading-tone resolving to the tonic.

All other chords are *equivocal*, that is, they may belong to different keys. Thus the major triad on *G* not only belongs to *G* major, but is likewise the dominant chord in *C* major and *c* minor, the subdominant in *D* major, and the triad on the sixth degree in *b* minor.

This equivocal relation not seldom renders the course of the modulation doubtful until still further harmonies are reached; in fact, a decisive modulation can be reached only through the *harmony of the dominant Seventh* and its derivatives.

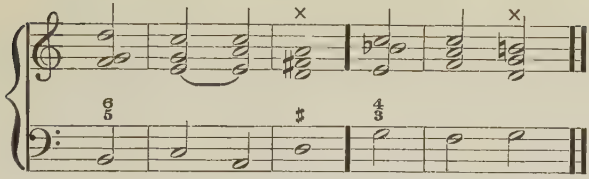
The musical ear itself proceeds very simply in grasping a modulation; it always conceives the foreign harmony as belonging to that key which is most nearly related to the ruling key. Thus, in the following example,

208



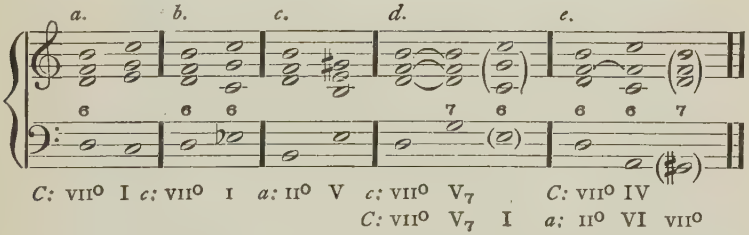
the major triad on *D*, considered by itself, would belong to the key of *D* major; but in connection with *C* major its natural effect will be that of the dominant chord of *G* major, and the ruling key cannot be definitely determined before still further harmonies have been heard.

Similarly, the dominant quality of the major triad is manifest in the following examples:

209

The *minor triad* has a less decided effect, because the ear does not so readily interpret its characteristic significance as it does the dominant significance of the major triad; consequently it is, on the whole, not well adapted to establish the key immediately. The cases in which it enters directly as tonic triad are comparatively infrequent, and then it is only the subsequent entrance of the dominant harmony which positively establishes its tonic status. (See p. 137.)

The diminished triad establishes the key with certainty in most instances. To be sure, considered in and by itself, it is really an equivocal triad, because it can belong to three different keys; *b–d–f* may occur in *C* major, *c* minor, and *a* minor. However, the connection in which the triad appears will prove decisive:

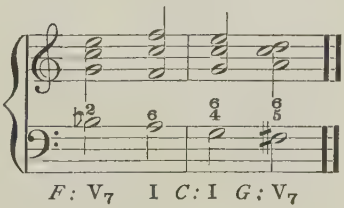
210



We perceive that even here dubious cases are not excluded; but in such the entrance of a third harmony (in the manner shown at *d* and *e* above) will always clear the situation.

The entrance of the $\frac{6}{4}$ chord on the strong beat indicates, in the great majority of cases, a modulation, for it is characteristic of the $\frac{6}{4}$ chord, when introduced in this manner, to sound like a *tonic triad*. Thus, in the following example (quoted from No. 217, Ex. 2):

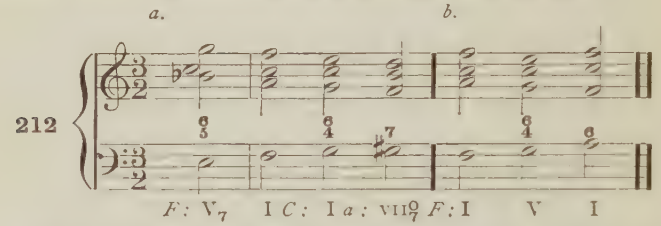
211



a *close* is formed by the entrance on the strong beat of the $\frac{6}{4}$ chord on *g;* hence, the triad *C–e–g* is to be regarded as a tonic triad. It makes no difference that this close is not a complete ending, the $\frac{6}{4}$ chord being directly followed by a modulation (into *G* major) instead of by the dominant and tonic harmonies in succession. The effect is that of a modulation to *C* major, although the triad *C–e–g* still properly belongs to *F* major. But when the $\frac{6}{4}$ chord enters on the weak beat (arsis), it is treated like any other triad.

Note. — A closing cadence with the $\frac{6}{4}$ chord can, moreover, be formed in tripartite time (ternary rhythm) just as well on the second beat as on the first:

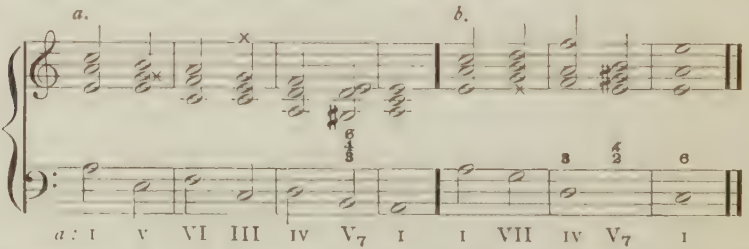
212



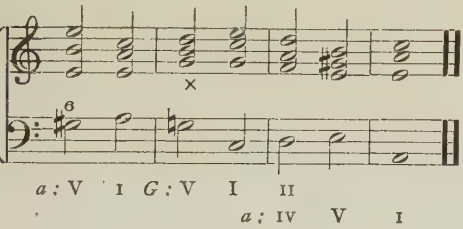
At **a** the cadence-form is evident, even though interrupted; that is, the entrance of the $\frac{6}{4}$ chord brings about a modulation. At **b** the purely "passing" character of the $\frac{6}{4}$ chord is equally manifest.

Besides, a close of this kind with the $\frac{6}{4}$ chord is often introduced by means of chords *foreign to the scale*, and especially by chords of the key of the dominant and of the parallel minor key. According to Hauptmann, this represents a "reaching over" into another key-system. Further explanation will be given under "Cadences."

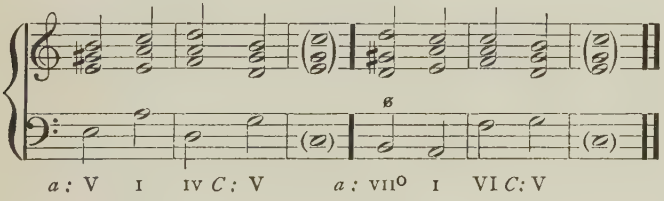
Furthermore, remember that the erection of harmonies in minor may be effected in a twofold manner (compare pp. 35 and 36), and that a true modulation is therefore *not present* in many cases where we might be inclined to assume one. In the following examples:

213

we decidedly do not leave the key of *a* minor. In each instance $g\natural$ must be written; it would be quite impossible to substitute $g\sharp$ in the harmonic connections at the points marked ×. But no one who can think correctly in music would feel that a modulation took place here. In the next example, however, the case is different:

214

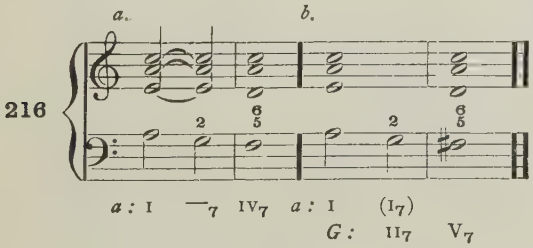


The entrance of the major triad on the seventh degree (in minor — not raised) makes the impression of a modulation in many cases (as suggested in the Note on p. 35), and especially when it appears in connection with the major triad on the third degree (*G–b–d—C–e–g*). It then sounds like the dominant triad, and the following triad has the effect of the tonic; hence, the chord-signatures will be more correctly written as above. (In No. **205** the triad *C–e–g*, considering the manner of its entrance and the connection in which it appears, can also not be regarded as belonging to *d* minor.) Similarly, the connection of the triads on the fourth and sixth degrees with the major triad on the seventh seems to indicate a modulation into the relative major key:

215

In either case the subsequent entrance of the triad *C–e–g* would make the modulation an accomplished fact.

Concerning the seventh-chord on the first degree in minor, it is employed only with the *minor* Seventh (compare Note on p. 94), because a resolution of the major Seventh to the sixth degree cannot be effected. Its entrance brings about a modulation only when it appears in connection with a triad belonging to a foreign key. For illustration:

216

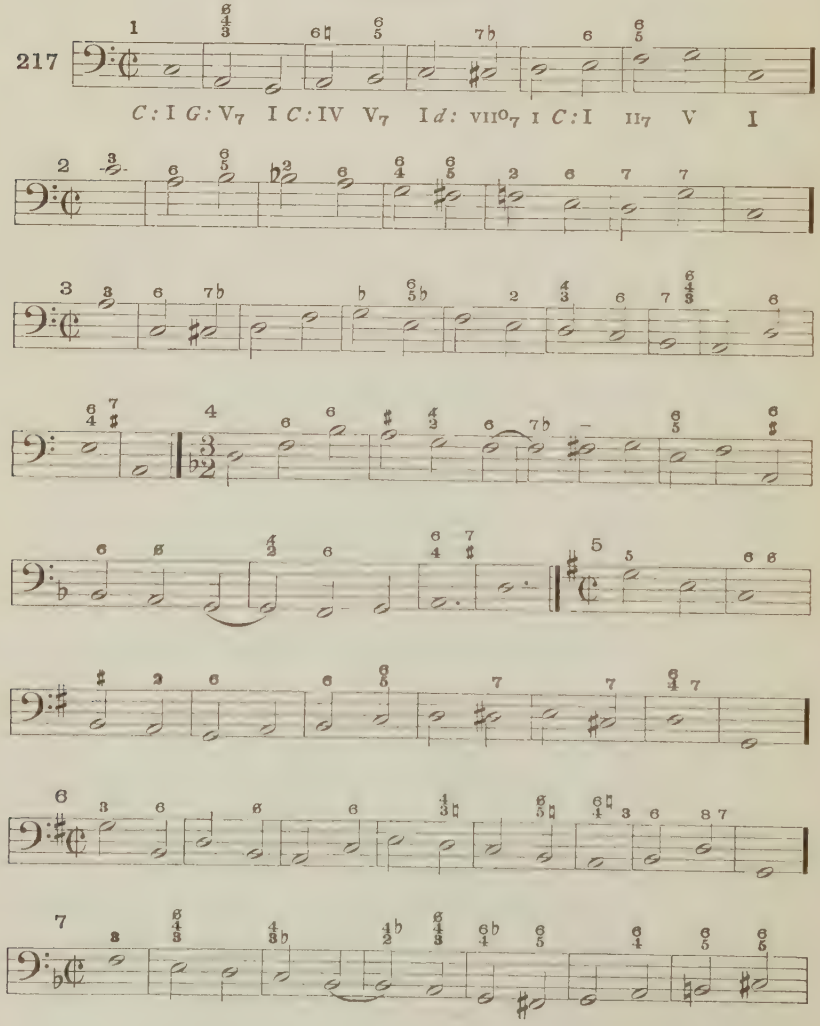
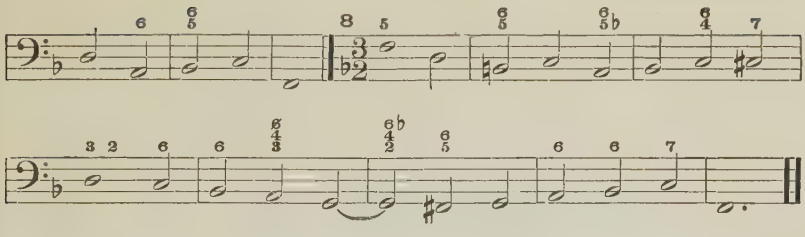


At **a**, no modulation occurs. At **b**, one may assume *G* major even before the entrance of the seventh-chord *a–c–e–g;* for even though the modulation is not decided by the entrance of this chord, it is at least favorably prepared. For the rest, little objection can be raised against the chord-signature in parenthesis, because, at bottom, the modulation is determined only by the further progressions.

For practice in following out the modulation, a few exercises are appended; more on this subject will be found in Chap. XVI.

EXERCISES

217



The progress of the modulations may be marked in the way given for the first exercise, the letters indicating the key, and the Roman numerals (as we know) the degrees on which the given chords are found in the proper keys.

PART II

Accidental Chord-Formations. Tones Foreign to the Harmony

CHAPTER XII

Suspensions

When all the parts *progress together* to the following chord, a certain uniformity and monotony in the musical flow results, particularly when (as in our earlier examples) there is no *metrical* variety in the movement.

A novel linking together and blending of the chords, with a consequent more interesting interplay of harmonic connections, arises when all the parts do not progress simultaneously; one or more of them being held back while others proceed to their several places in the next harmony.

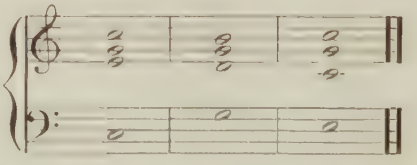
The most admirable and important means by which this linking together is accomplished, is

the Suspension.

It arises from delaying the progression of a part (a progression expected, or even necessary, at a certain time), so that this part, which ought to proceed *downward* by a step in order to assume its place in the next chord, still dwells on its tone in the *first* chord while the others progress to the second chord, not passing to its harmonic tone in the second chord till afterwards.

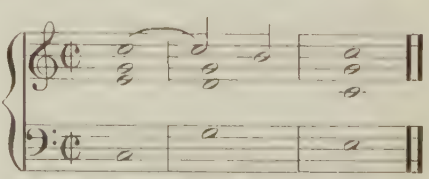
In the following series of chords:

218



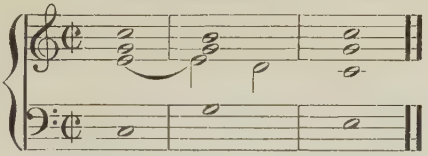
the soprano part may hold *c* over the entrance of the second chord, and afterwards proceed to *b*, like this:

219



The tenor part in No. **218** can likewise be held over as a suspension:

220



The characteristic features of the suspension are, that it *forms a dissonance* with the harmony which it accompanies, and thereby acts as a connecting-link between the harmonies in rendering the necessary relation of two chords more intimate by the anticipated resolution of the dissonance. In this respect the suspensions resemble the *Sevenths*, and in common with them require, as connecting intervals, both *preparation* and resolution.

However, the dissonant effect of the suspension does not invariably arise from its being a dissonant interval to some other part; cases may occur where the suspension does not form a dissonance with any other part, but where its character as a suspension is manifested only through its progression and its actual and relative position, as in No. **220**, where the suspended tone forms a chord of the Sixth, and where only the unusual appearance of the triad on the third degree, together with the peculiar position of the chord, in connection with the progression of the tenor, produces the characteristic effect of the suspension.

From the above examples may be deduced the rules necessary for effecting suspensions.

Where a part progresses downward by a step, a suspension can be formed under the following conditions:

(1) It must be *prepared*, and

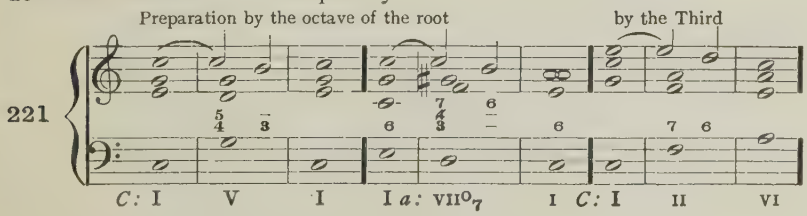
(2) It must be *resolved*.

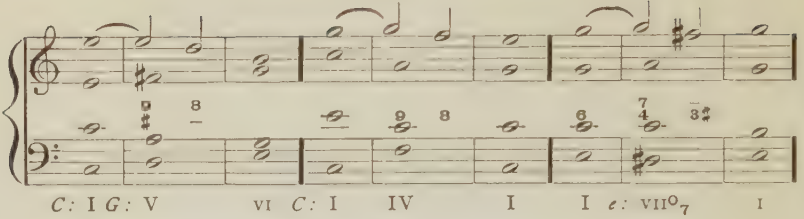
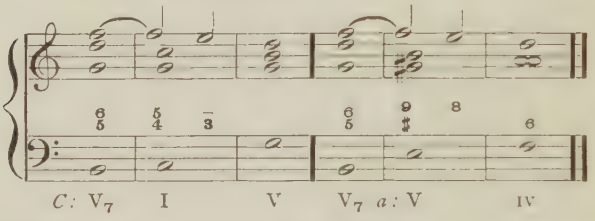
Therefore, with a suspension, *three* points have to be considered; its *preparation*, the *suspension itself* and its position, and its *resolution* or progression.

(*a*) The *Preparation*.

Any member of a triad may serve for the preparation of a suspension. The Sevenths are also (though seldomer) used for preparation, the dominant Seventh most frequently.

221



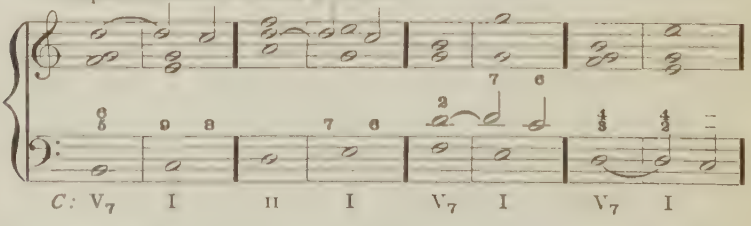
by the Fifth

by the dominant Seventh

Preparation is effected on the *arsis;* the *suspension* itself enters on the *thesis*. Besides, the rule given before (p. 61) holds good, that the preparing-note may *as long* as, or *longer* than, the suspended note, but must not be shorter.

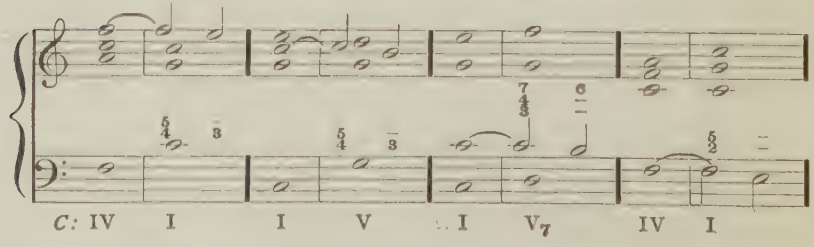
(*b*) The *Suspension.*

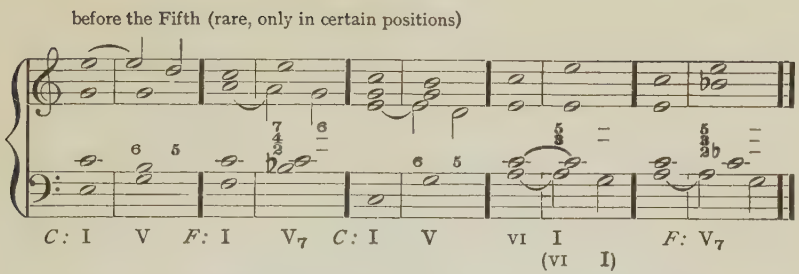
The *entrance* of the suspension on the thesis has just been alluded to; we shall now explain its position in other respects.

A suspension may occur in any part before any interval of a triad; but only in rare cases before the Sevenths.

Suspensions before the octave of the root

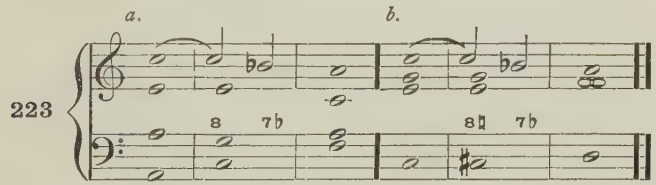
222

before the Third





Touching suspensions before the Fifth, we refer to the remarks on No. **220**. Among the examples just given, the first and third are quite in the style of suspensions, whereas the fourth is no true suspension. Where a Seventh joins the chord, as in the second example, the dissonant character of the suspension instantly asserts itself, and the same in the fifth example.

It is evident that a suspension can seldom be formed before a Seventh, for the reason that the suspended tone would generally be the perfect octave, which in and by itself is merely an interval used in doubling, and can never occur as a dissonant interval (No. **223a**), unless its octave should be *diminished*, as at No. **223b**:



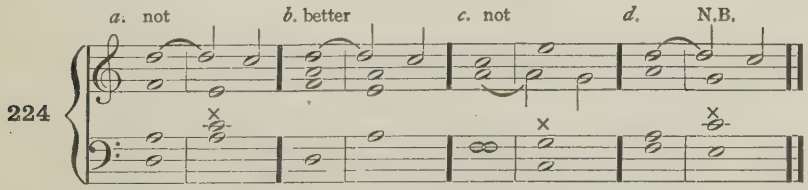
In the former instance the Seventh will always be a *passing-tone.*

(*c*) The *Resolution.*

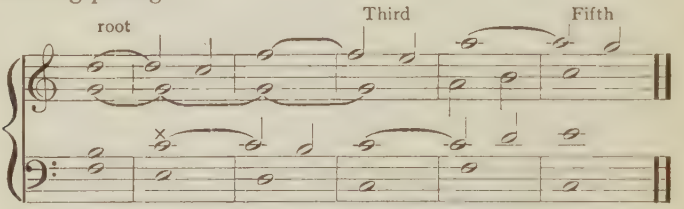
As noted above, the suspension is resolved by leading the suspended tone a step downward.

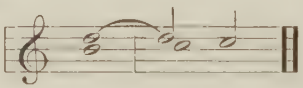
NOTE. — Exceptional resolutions will be exhibited later.

We must also take care that the *resolving-tone* (the chord-tone delayed by the suspended tone) *is not doubled* in any other part than the bass (or lowest) part, which may double the resolving-tone without injuring the harmony.



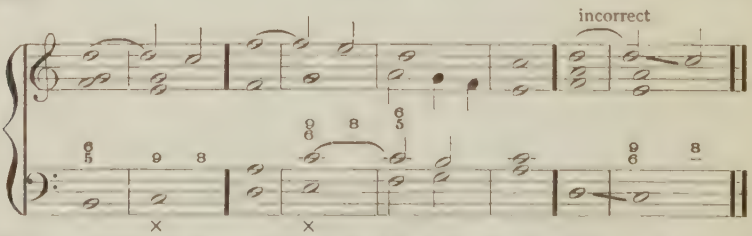
In example **a** the tenor progresses from *a* to *c*, the latter tone being delayed in the soprano by the suspended *d;* in example **c** the tenor takes the tone *g*, before which *a* is suspended in the alto. Both these doublings are incorrect, more particularly because the *Third* and *Fifth* of the chord are involved. In example **d**, at N.B., the note doubled is the *root;* in this case the effect is better, particularly when the doubling necessarily results from some consistent scheme in the part-leading, as in the following passage:

225

Note. — It should be added, that in a suspension the doubling of the root is permissible only at the distance of at least an *octave*, and that doubling in *unison* is incorrect. For illustration:

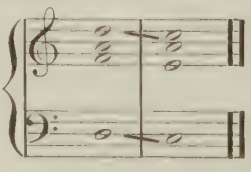


though a suspension may sometimes be allowed between bass and tenor, or between the lowest part and the next-lowest.

However, the lowest part (usually the bass), as it determines the chord, counterbalances the dissonance of the suspension; for this reason doublings are permissible when brought about by correct part-leading, as below:

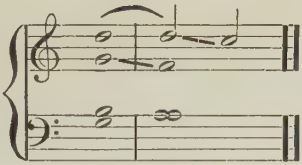
226

The faulty progression of soprano and bass in the last example is plainly shown by suppressing the suspension which merely delays the progression, thus discovering the *parallel octaves.*

227



Parallel Fifths which are merely hidden by the suspension, are just as bad:

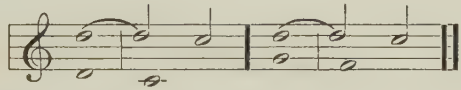
228



In this latter case, however, the considerations will rule which apply to all *covered Fifths;* for a given position, situation and progression may permit of such part-leading that the Fifths have no ill effect.

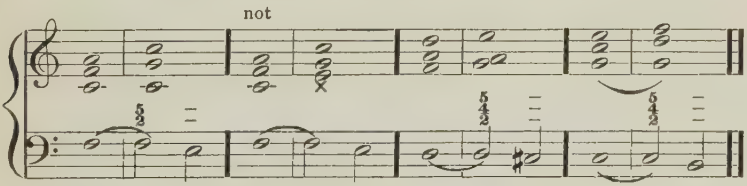
From the foregoing observations the following rule may be formulated:

A suspension does not annul parallel octaves and Fifths; so these progressions

229

are incorrect. But parallel Fifths of this sort are not to be rejected unconditionally, when the progression of the other parts is such as to disguise their unpleasant effect. Rules covering all cases cannot be given; always to reject them would seriously hamper our work.

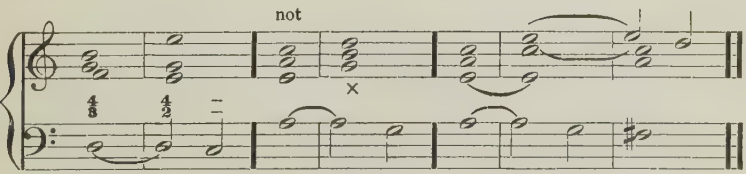
Suspensions in the bass, which occur oftenest *before the Third* of the chord (or, what amounts to the same thing, before chords of the Sixth and the Fifth and Sixth), allow *no doubling in the other parts.*

230



Suspensions before the root and the Fifth are seldom available in the bass. (See No. **222,** last line.)

231

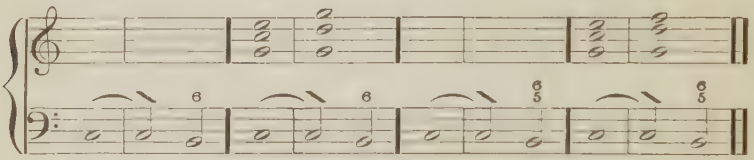


Some of the suspensions in these last examples are provided with Thorough-bass notation.

Where the suspension occurs in one of the three highest parts, the intervals formed with the bass by both the suspension and its resolution are marked, *e.g.*, $\frac{5}{4}\,\underline{3}$ 9 8 7 6, and the other figures determine the chord when necessary; for instance, $\frac{8}{6}\,\underline{8}$ the chord of the Sixth, $\frac{6}{5}\,\underline{4}$ the chord of the Fourth and Sixth (or $\frac{7}{4}\,\underline{6}$).

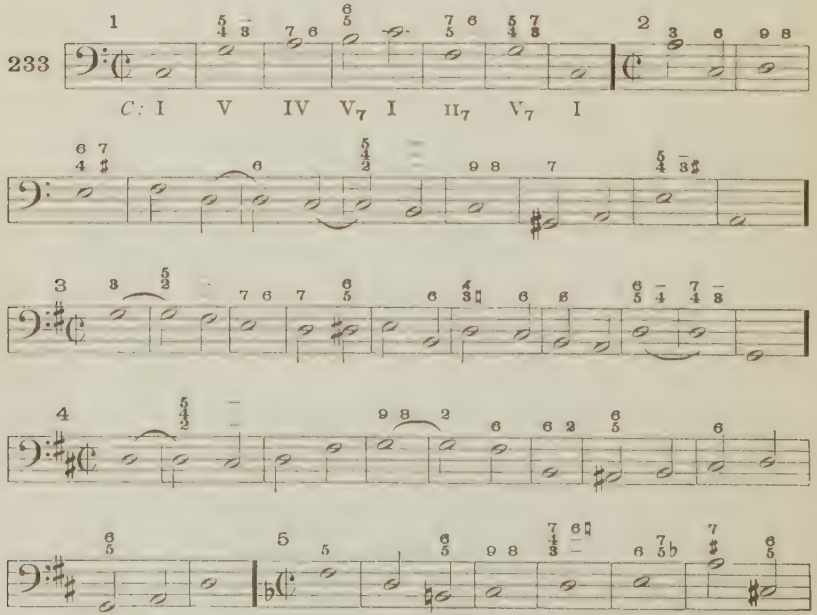
Where the suspension occurs in the lowest part, the *accidental* intervals formed by the other parts are also indicated by figures, for instance, $\frac{5}{2}\,\underline{\ }$, or (for the seventh-chord) $\frac{5}{4}\,\underline{\ }$; the lines after the figures mean that the parts hold their tones over during the resolution of the suspension.

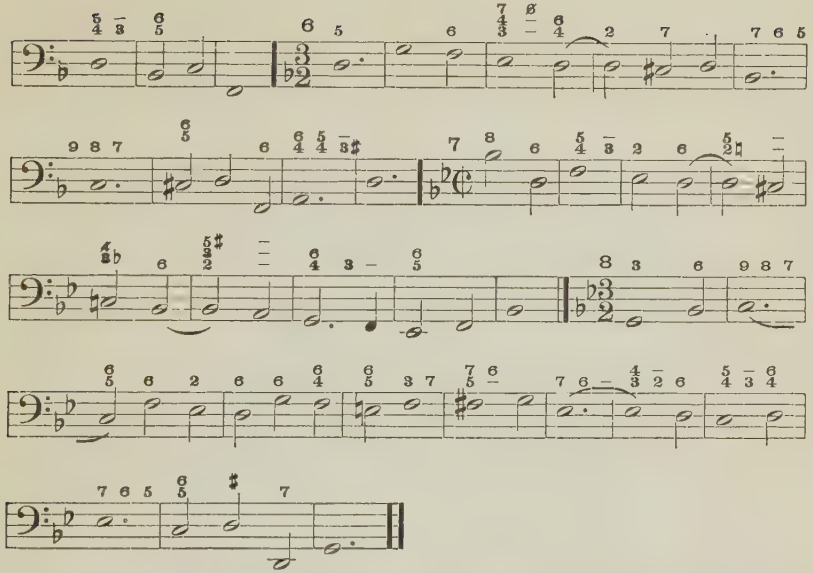
A suspension in bass is also sometimes indicated by a slanting line over the bass note; then the proper chord-figure is set over the resolving-tone, showing its chord more plainly. For example:

232

The first mode of thorough-bass figuring, being the commonest, is employed in our next exercises.

EXERCISES

233





In working out these and subsequent exercises it will be a good plan to write each of the parts on a separate staff. This mode of "notation in full score" lets the eye follow the course of each individual part more readily, and affords excellent preparatory practice in score-reading.

Besides, it is a practical idea to write out the parts, (which, in strict harmony, are always assumed to be vocal parts,) in the traditional clefs assigned to each, with which every musician ought to be acquainted. These clefs can be learned by attentive practice, and by comparison with the familiar treble and bass clefs.

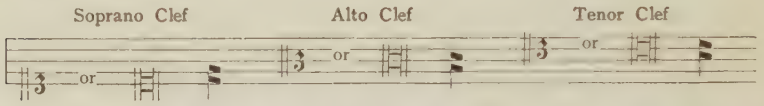
NOTE. — In order to read and understand scores one must know the alto and tenor clefs, since many parts or instruments are written wholly or partly in these clefs. Even a knowledge of the soprano clef, which occurs seldomer, greatly facilitates the reading of certain instruments whose tuning is peculiar, such as the clarinets.

Industrious practice in the use of these clefs is, therefore, urgently recommended. We should state, however, that the treble clef is now commonly employed for the notation of the three highest parts, the tenor being written an octave higher than it sounds (see p. 12). And a mixture of the clefs is sometimes found, the treble clef being used in some scores for the soprano part, while alto and tenor are written in their individual clefs; and in other scores (Mendelssohn's, for example) the treble clef is used for soprano and alto, and the tenor clef for the tenor part.

The individual clefs for the three highest parts (Soprano, Alto, Tenor) are called "*C*-clefs."

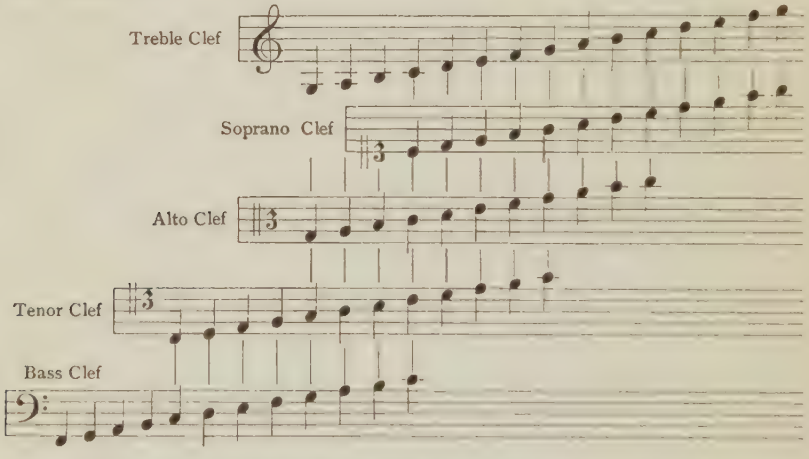
For the lowest voice-part, the bass, the usual bass clef (or *F*-clef) is to be employed.

Whichever line the *C*-clef is placed on represents the seat and pitch of the note called "Middle-*C*" (*c'*); thus, in the *soprano* clef, this *C* is situated on the *lowest line;* in the *alto* clef, on the *third line;* and in the *tenor* clef, on the *fourth line:*

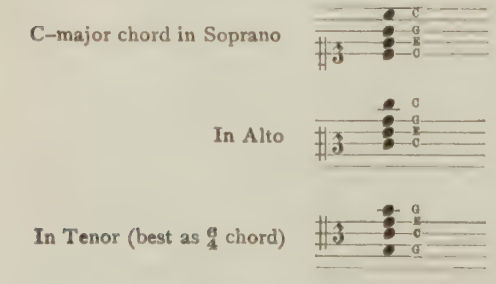


NOTE. — The third form is the Gregorian *Do*-clef, used only on the *four-line staff* on the second, third and fourth lines.

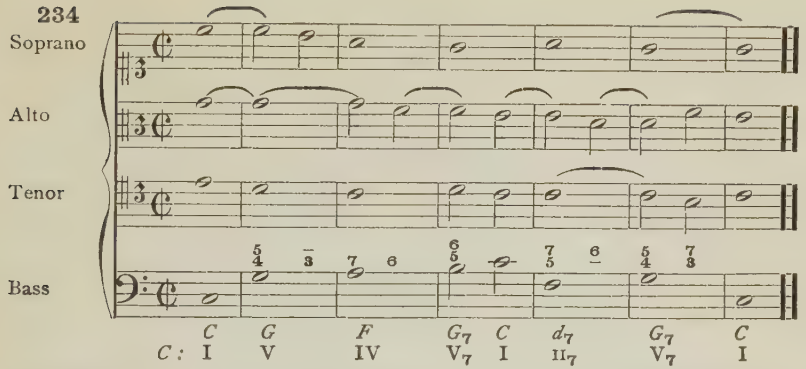
The ordinary compass of the voice-parts, as written in these clefs, is as follows:



The easiest way to learn these clefs is, perhaps, to memorize the position of the *C*-major triad (as a complete four-part chord) in each clef, noting the place of each part; one can then readily find the notes lying between or beside them.



Below we give the working-out of Ex. 1 in No. 233, with *C*-clefs:



While the rules heretofore given should be observed, the solution of these exercises requires dexterity and often a freer leading of the parts as regards their position, since the necessity for improving the situation of the suspensions not infrequently calls for a change in the placing of the parts, as well, whose leading we have previously tried to make as smooth as possible.

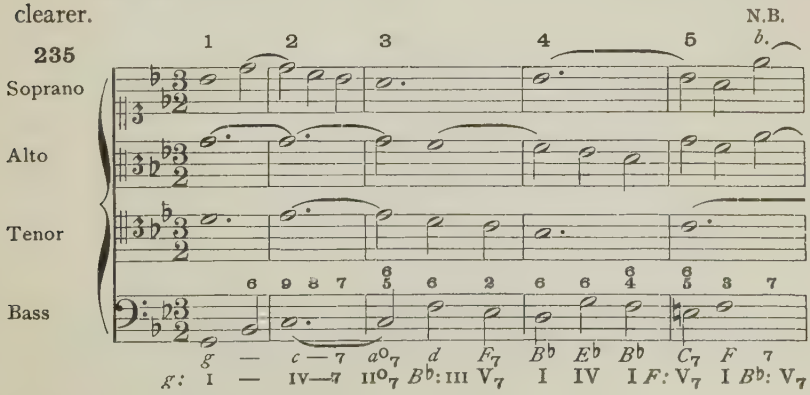
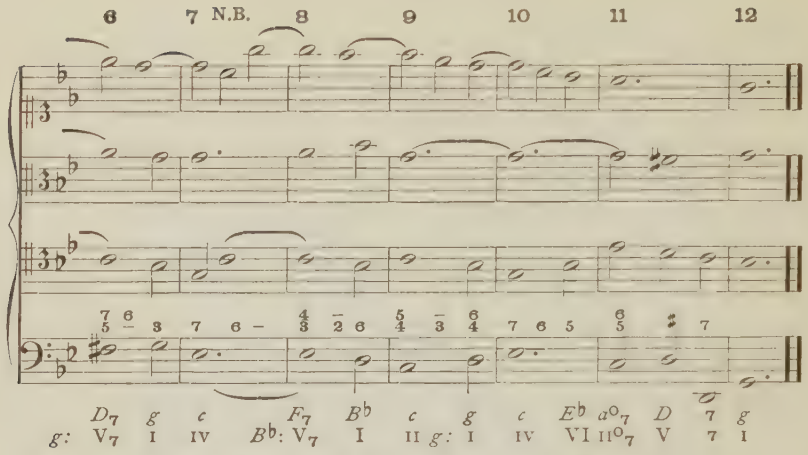
Thus the part-leading will naturally result in *open* position, which will, in turn, give way to *close* position wherever it seems necessary and practical.

In these alternations between open and close position, observe the following rules:

The parts can never progress **simultaneously** *by a step or leap from one chord to another* (foreign) *chord, beyond the bounds of their natural tendency, except in isolated instances where* **one and the same** *chord is transposed into a different position.*

Any part may then leave its position, when one or more of the other parts are held over.

The following working-out of Ex. 8 in No. **233** will make this point clearer.



A detailed explanation of this working-out now follows:

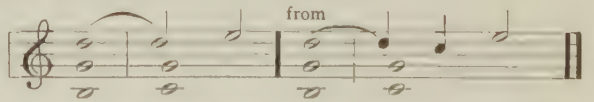
The exercise begins in close position, which is forsaken in meas. 5 for open position, which continues till meas. 11, where close position returns.

This was brought about by giving more freedom to the leading of the soprano and tenor. The former, in meas. 5, leaps out of its position on the *Seventh* e♭ (at N.B.). This kind of leap may occur when the *root* is present in the chord and is held over (like the *F* here in the bass); similarly, the soprano again forsakes its position in meas. 7 by leaping to the Fifth *g while the rest of the chord is held*, and thus lets the suspension enter in a more favorable place. Finally, close position once more results from a better and freer leading of the tenor in meas. 10.

Suspensions from Below Upward

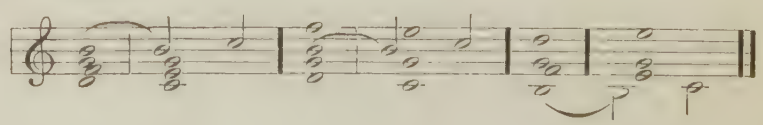
Suspensions from below upward can be regarded as real suspensions only in a few isolated cases. Most progressions of this sort arise from a *contraction* (abbreviation) of a regular suspension from above downward with an upward continuation; for illustration:

236



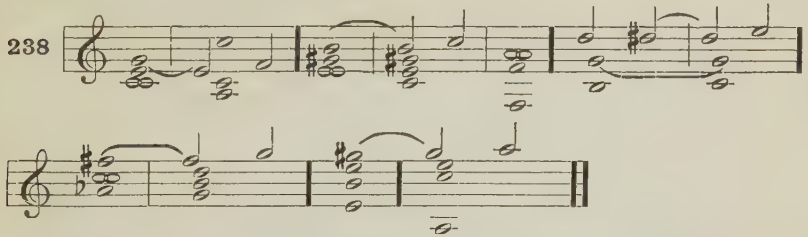
The suspension from below upward may be formed by the progression of the *leading-tone:*

237



and may also occur with certain intervals which progress a *semitone* upward, more especially in such altered chords as contain augmented intervals formed by raising; *e.g.*,

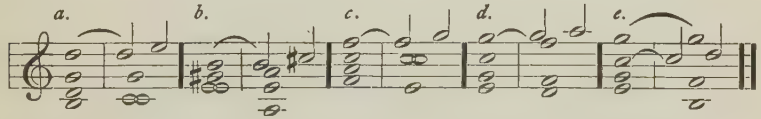
238



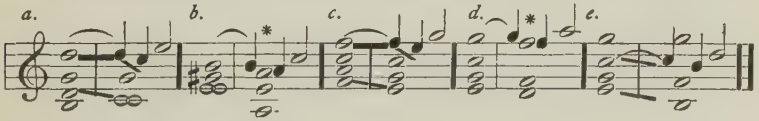
It should be added that, as before, the resolving-tone (chord-tone) must be present in *no part* other than the bass.

NOTE. — In the last example in No. 238 we find the same combination of tones which was earlier (p. 54) shown to be the seventh-chord on the first degree in minor, and which was asserted to be unavailable as a fundamental harmony (see p. 64). It is needless to explain that, as employed above, we have simply a case of the suspension of the leading-tone.

Other suspensions, particularly such as resolve upward by a whole tone,

239

either exhibit by their actual effect the unnaturalness of their progression, or, when measured by theoretical standards, must be pronounced not genuine, and unavailable in pure harmony, however often they may be employed in practice. By carrying out these improper suspensions in the manner shown above (No. 236) the incorrect progressions on which they are based are brought to light:

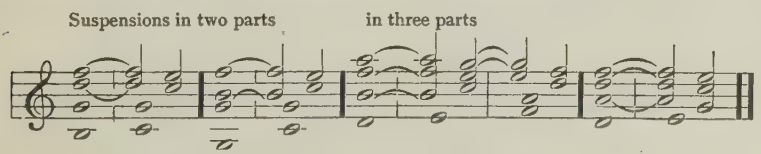
240



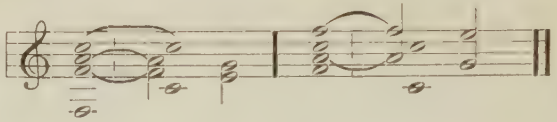
SUSPENSIONS IN SEVERAL PARTS

Suspensions may occur simultaneously in several parts.

241



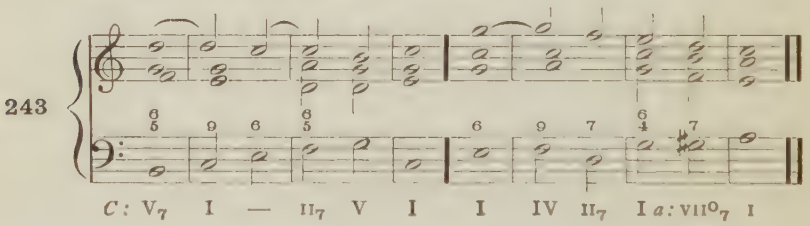
The chord of the Fourth and Sixth also occurs not infrequently as a double suspension:

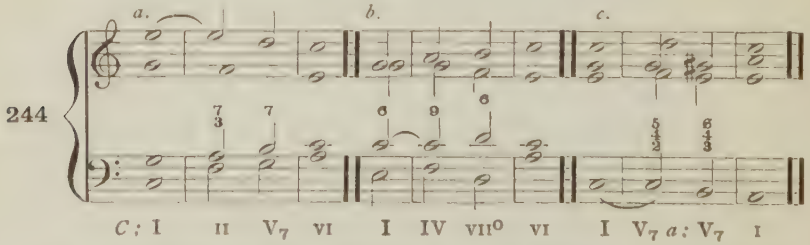
242

Freer Movement of the Parts in Resolving the Suspension

In our previous exercises the preparation, entrance, and resolution of the suspension were effected by *two* chords, as the parts not participating in the suspension were held over its resolution. *Three* chords may also assist in the progress of the suspension, rendering the change of harmony and the part-leading still fuller and richer in variety.

This occurs when, during the resolution of the suspension, one of the other parts — generally the bass — or more than one of them, move on at the same time and so form a new harmony.

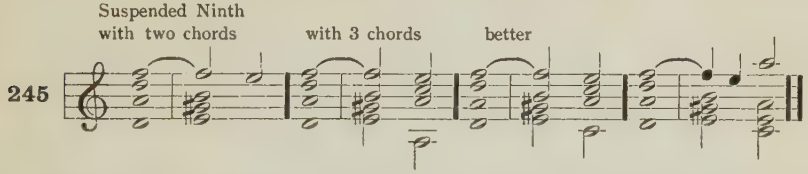
For illustration (where the bass progresses):

243

Where two or more parts progress:

244

In all these examples the resolution of the suspension proceeds regularly during the progression of the other parts to a new harmony, of which the resolving-tone itself is a member.

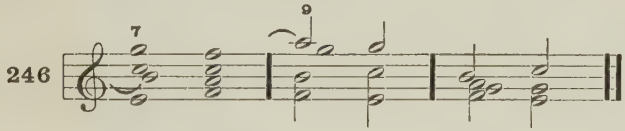
Note. — We should observe, in explanation of the view expressed in Chap. IX concerning chords of the Ninth, that many harmonies where the Ninth occurs, and which are regarded by some as ninth-chords, may be explained in the above manner.

Such a case is No. **244b**, where the cadencing root-progression [implied in the chords!] *F–b* is much more simply explained as the progression of a *suspended Ninth during the movement of three chords*. Through this simpler analysis we arrive at the same result, as an examination of all the following examples will show.

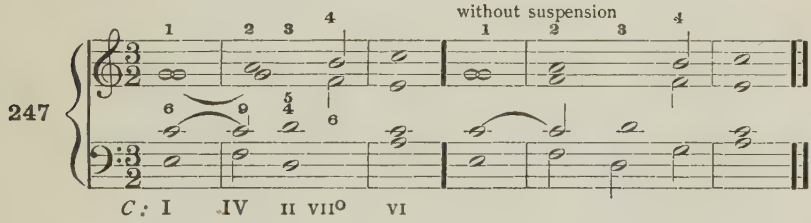


The entrance of the unprepared Ninth will be taken up later under "Organ-point."

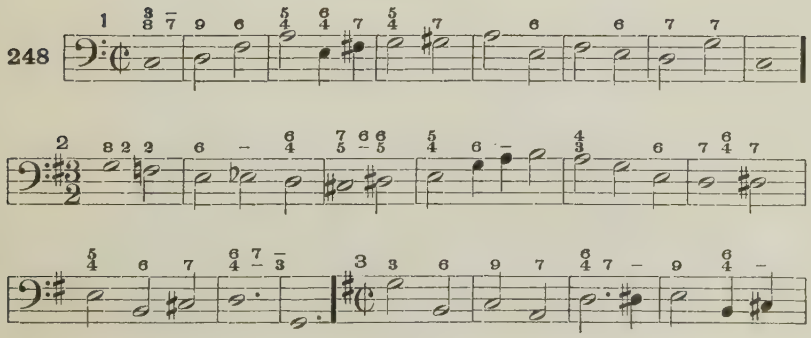
To supplement the observations in Chap. IX we will add, that one argument which may be advanced against independent ninth-chords is the impossibility of interchanging the Ninth *with the root* in such wise as to bring the latter into the immediate vicinity of the Ninth, as we can always do with the Seventh in seventh-chords; for example:

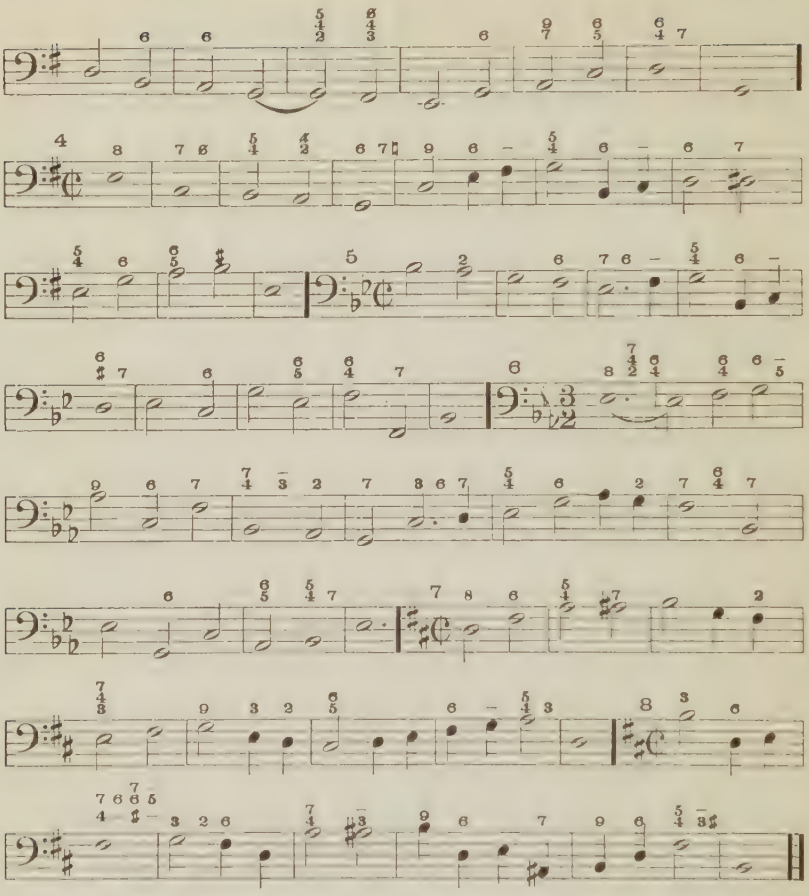


Four chords can also be involved in the progress of a suspension, when the suspension stands before an harmonic tone not present in any of the other parts:



EXERCISES





Between the suspended tone and its resolving-tone other tones may be interpolated.

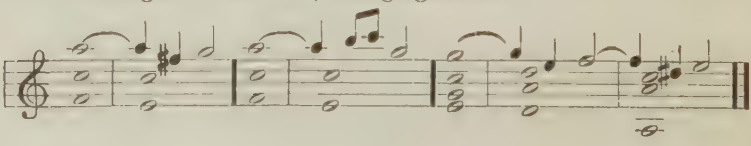
These may be

(1) Tones belonging to the chord:

249

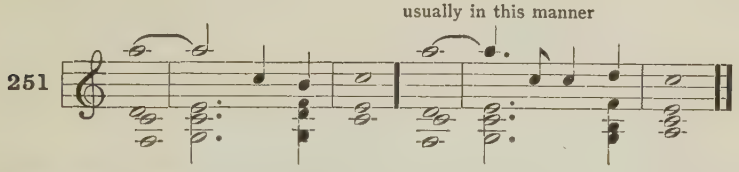
(2) Tones foreign to the chord, changing-tones:

250

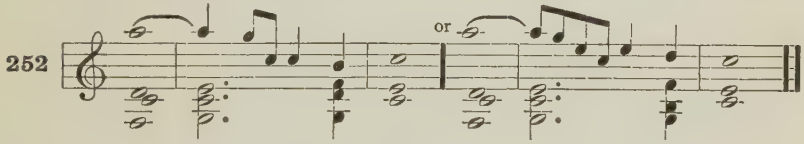


A more complete explanation of these and similar passages will be found further on, in the exposition of the Passing- and Changing-Notes.

Passages likewise occur in which the suspension is not resolved at all; for example:



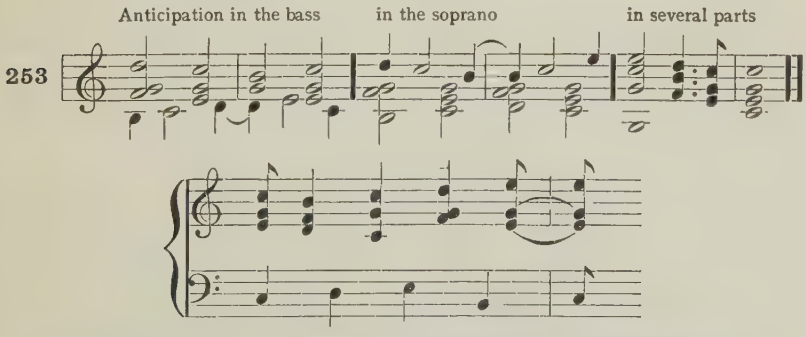
They arise from the omission of connecting-links in the following harmonies:



Anticipation

The anticipation of a tone, which is less frequently employed than the suspension, is the opposite of this latter, and consists in advancing one or more parts of the next-following chord so that they are heard *sooner* than the others, and sooner than the *metrical construction* would lead us to expect.

Where long notes are used, and in a slow movement, this species of part-leading seldom or never occurs; because in this case the roughness of the resultant dissonances would be intensified to intelligibility. As a general thing, comparatively short divisions of the measure are thus advanced "by anticipation." For illustration:

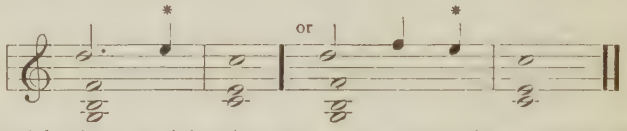


The similarity of this progression of the parts, in its metrical form, to that which the general theory of music includes under the term "syncopated notes," is very apparent. Syncopations, however, are not formed

by the anticipation of chords, but rather by delaying their entrance ("after-striking"), and thus possess merely rhythmical significance.

In anticipation, too, the movement of the parts may be freer under certain conditions; for instance, some other harmonic tone may be anticipated than the one intended at the entrance of the chord, as in this familiar closing formula:

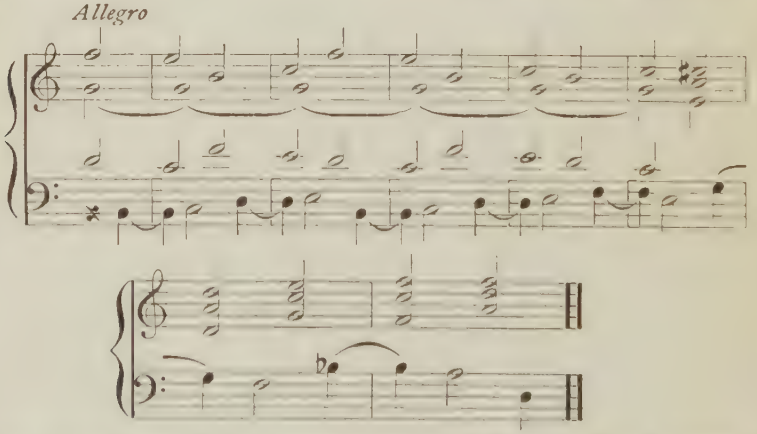
254



As the antithesis to anticipation we may mention the so-called "After-striking" of chord-tones. This resembles the suspension, in so far as it likewise involves preparation and resolution; but in another aspect is essentially different, its character being manifested chiefly in the metrical and rhythmical movement, so that after-striking tones or chords always occur in series of some length, whereas suspensions may appear under totally different conditions either singly or in considerable numbers.

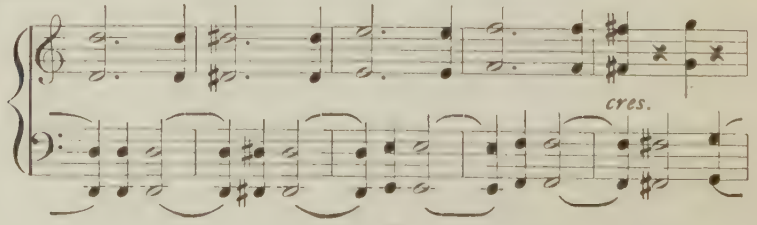
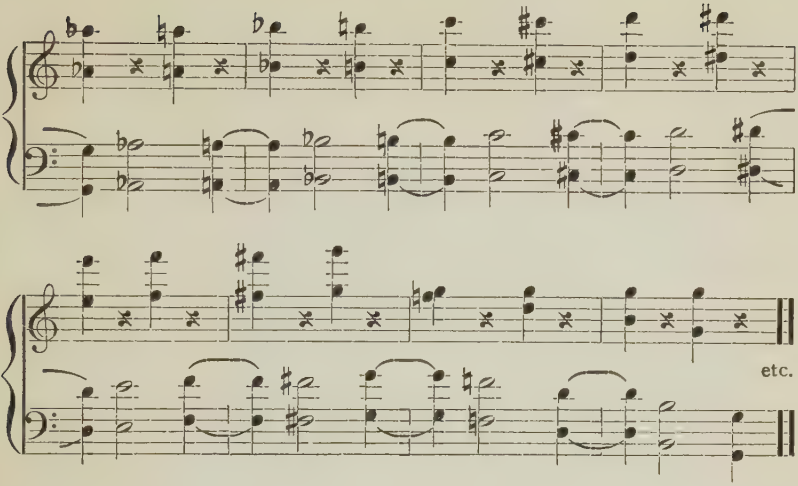
The next example illustrates a series of such after-striking tones in the bass.

255



The unison passage in Beethoven's overture to Leonore, No. 3, belongs in this class:

256



CHAPTER XIII

The Organ-Point. Sustained Parts

A characteristic diversity and blending of the harmonies arises from continuously sustaining the tone or tones of one or more parts, so that the progressions of the remaining parts form, with the sustained tone or tones, a succession of accidental chords.

We not infrequently find a continuously sustained tone, especially in the bass, either at the beginning of a piece, or in the middle, or towards the close — where a cadence is to be expected — while the other parts continue their harmonic movement with no apparent reference to it.

When such a continuously sustained tone lies in the bass, it is called an

Organ-Point ;

when such tones occur in the other parts, they are called

Sustained or Stationary Tones.

NOTE. — These latter are also sometimes improperly styled "organ-points."

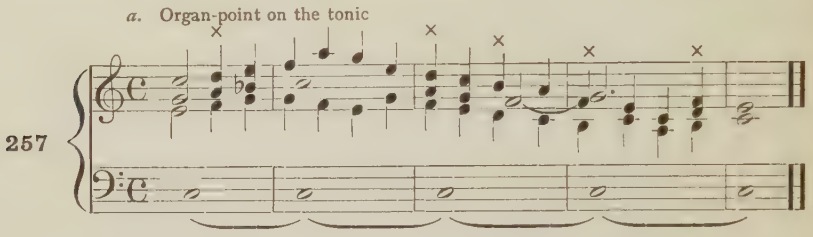
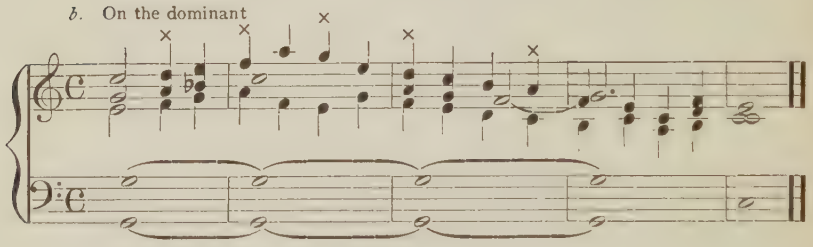
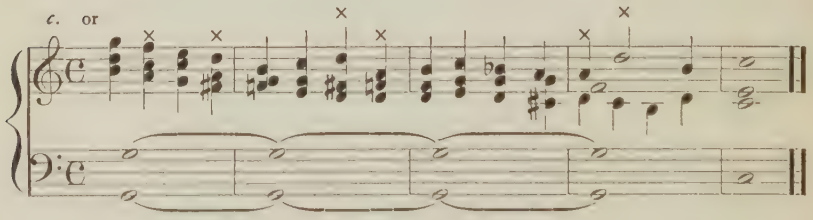
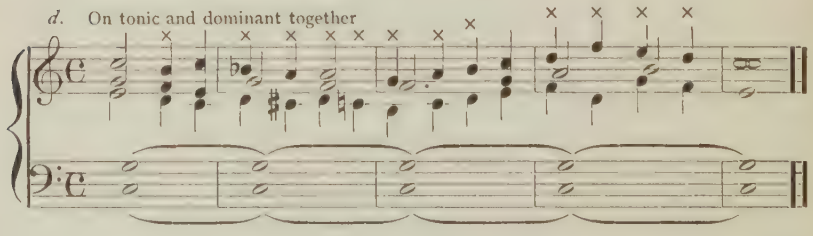
The tones adapted for sustaining in this manner are the *tonic* and *dominant*, and sometimes *both* are sustained *together*.

NOTE. — Experiments with the Third of the triad which have recently been tried by some composers, exhibit only too plainly a forced and artificial character.

Both the harmonic connection and the progression of the remaining parts during the organ-point are effected according to the familiar rules; the next-lowest part assuming the conduct of the harmony, and, in general, without reference to the sustained tone.

Below we give, first of all, a few examples, before entering into details concerning the treatment of the organ-point.

257

a. Organ-point on the tonic

b. On the dominant

c. or

d. On tonic and dominant together

In the above examples we have marked with a cross (×) each chord which does not belong harmonically to the bass tone.

For the treatment of the organ-point we offer the following precepts:

(1) *The organ-point enters on a rhythmically and metrically prominent beat,*

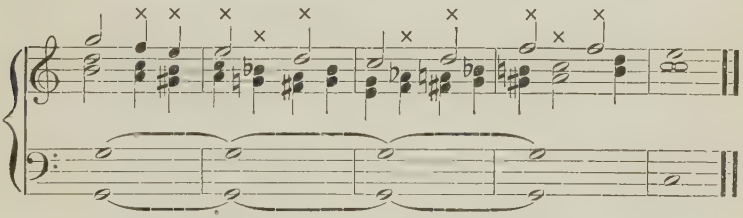
(2) *with a chord to which the bass tone belongs harmonically; and*

(3) *the organ-point must also end on a chord harmonizing with the sustained bass tone.*

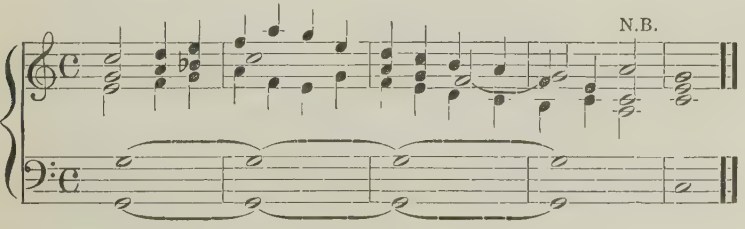
That is, the organ-point enters at the beginning or end of a period, or subdivision of a period, and on the thesis, and usually as the root of a triad (**257a, c, d**), or (as at **b**) through the $\frac{6}{4}$ chord.

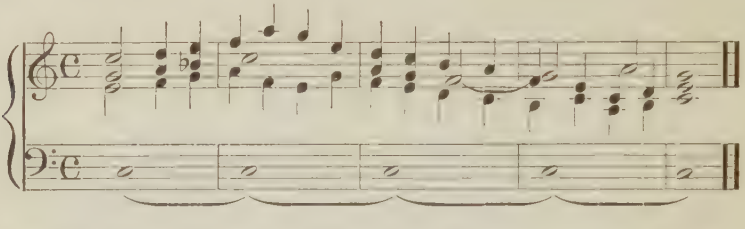
Take notice, further, that chords *foreign* to the bass tone should not continue long in unbroken succession, but often alternate with chords to which the organ-point belongs harmonically. This is necessary to prevent digressions which would violate the character of the organ-point, which is manifested in firmly binding together a varied succession of harmonic combinations.

From this standpoint, the following organ-point is open to criticism:

258

In an organ-point the fundamental part taking the harmonic leadership will be the part lying next the bass, or, in four-part harmony, the tenor. Therefore, all necessary progressions will be determined by this part, even where the organ-point itself happens to be a member of the chord. Thus, in No. **257a,** meas. 1, the progression of $b\flat$ in the alto is determined by the leading of the other parts, and not by the fact that $b\flat$ is the Seventh of the bass note.

When the organ-point occupies the dominant, as often happens at the close, no Plagal Close can be formed upon it; this follows from the third of the foregoing precepts. For example:

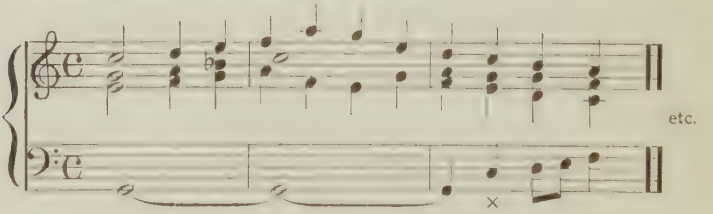
259

But a plagal close may be effected when the organ-point is on the tonic:

260

The end of an organ-point should be just as carefully handled as its entrance. In the above examples the end is regularly brought about by a cadence, and then offers no difficulty, excepting in passages like that in No. 259. But the organ-point may also take over the harmonic leadership before the cadence, and then the third rule must be strictly observed. For illustration:

261

But it is not correct to break off like this:

262

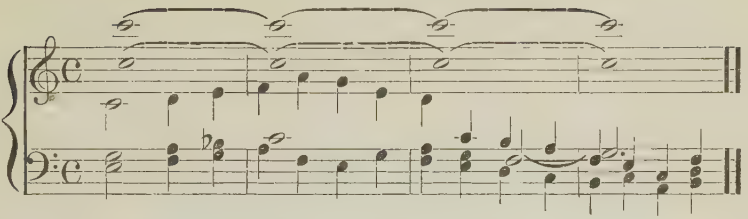


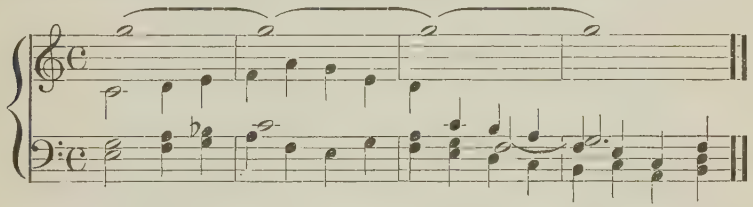
Sustained Parts

Cases in which the highest part, or the inner parts, are sustained after the manner of the organ-point described above, are less frequent than the latter, and require more caution in their treatment.

Sustained, or stationary, tones of this kind conform to the character of these parts only when they are accompanied by very few non-harmonic chords; for these high parts do not possess the weight to counterbalance foreign chords which is peculiar to the bass, or lowest part.

Hence, the organ-point at No. 257a, if transposed into the highest part, would sound quite unnatural in its final measures:

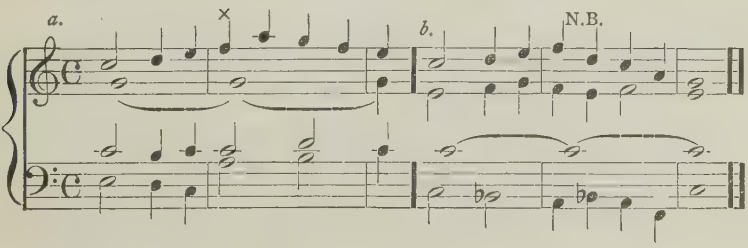
263

whereas the sustained tone illustrated below, being the dominant, is better, because the last chords in the example harmonize with it:

264

As an instance of the effective employment of sustained parts and continuous tones, and as a model for their treatment, we may cite a passage in the Gloria of Cherubini's *C*-major Mass, where the violins sustain *a*♭ for a considerable time, while the chorus and the other instruments carry on their particular melodic and harmonic progressions. Another instance is the long-sustained *d* in the violins in the introduction to the overture "Meeresstille und glückliche Fahrt," by Mendelssohn. In either of these passages but few chords will be found to which the sustained tone does not belong harmonically.

In this category the Trio in the Scherzo of Beethoven's *A*-major symphony also belongs, being based throughout on the tone *A*, which appears now as a sustained tone in the highest or an inner part, and again as an organ-point in the lowest, serving as the foundation-tone of the entire movement.

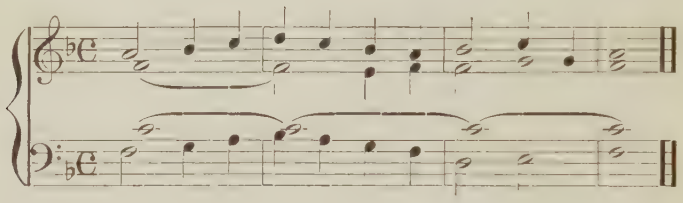
Sustained tones in the inner parts have to be handled just as carefully as in the highest part. In instrumental compositions they always appear considerably reinforced; in four-part writing they occur but seldom, and then not too greatly prolonged. For illustration:

265



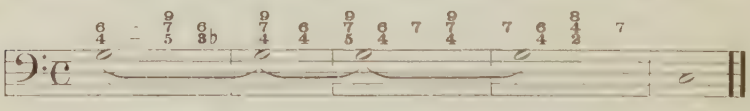
NOTE. — We shall now offer a few supplementary observations on the chord of the Ninth.

In No. 265b we find, at N.B., counting in the sustained tone, a complete inverted chord of the Ninth with a regular resolution. As previously remarked, the inversions of the ninth-chord cannot be used with the root and the Ninth close together, thus differing from the seventh-chords. The fact that they can occur, as above, at a wider interval, is by no means a reason for regarding them as independent chords, since they appear only under the conditions shown in our example, namely, together with a sustained tone; for it is characteristic of such a tone to support even harmonies which are foreign to it, as in the case of the following Ninth, which certainly does not form a ninth-chord:

266

Should we propose to indicate the chord-progressions above an organ-point in thorough-bass figuring, the figures must always refer to the sustained tone in the bass, and then in many cases the commonly accepted chord-figuring will suffer a change.

For instance, the organ-point given at No. 257b could be figured thus:

267



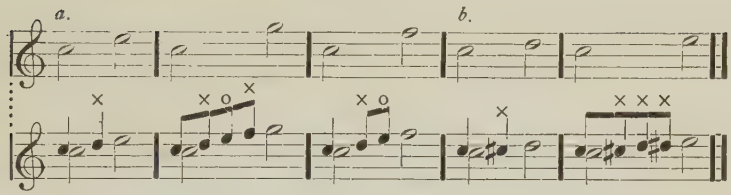
On account of being difficult to read, and still incomplete, such figurings are employed only for special purposes; for this reason we not seldom find, in scores where a figuring is given, the words "tasto solo" at the organ-point, which means that only the organ-point itself is to be indicated in lieu of the customary fuller organ-accompaniment.

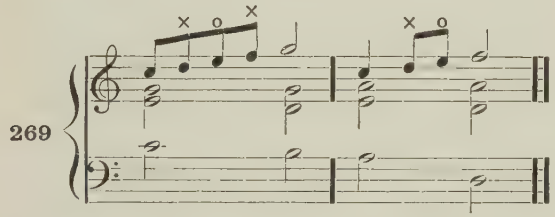
CHAPTER XIV

Passing-Notes. Changing-Notes

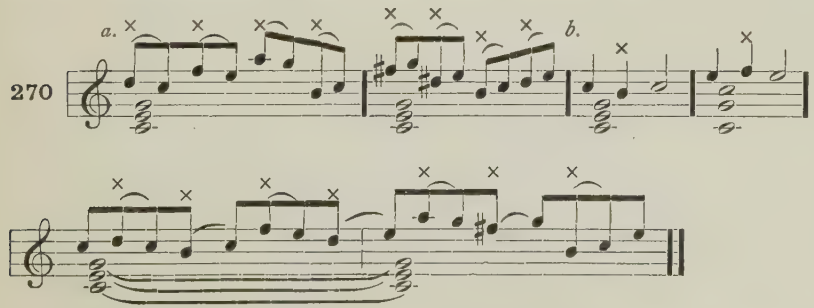
Among the tones foreign to the harmony, the Passing-notes and Changing-notes are of special importance.

The former result from filling out the intervals in the progression of a part from one harmonic tone to the next with intermediate tones; *e.g.*,



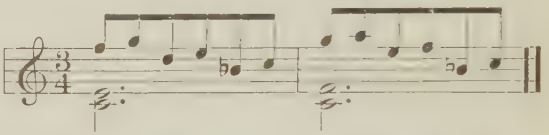
The notes marked by a cross (×) are passing notes; those marked with a cipher (o) are harmonic by-tones, assuming that a *C*-triad or an *A*-triad is erected on the first note in the respective examples. For illustration:

The passing-notes at **268a** are "diatonic," those at **b**, "chromatic."

Passing-notes *pass over* (form a passage) *from one harmonic note to another harmonic note;* hence they do not enter with the chord, but after it, on the smaller (unaccented) divisions of the measure, and can be introduced only *stepwise.*

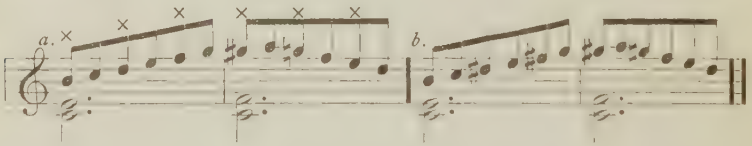
On the other hand, *changing*-notes are such tones foreign to the harmony as either enter with the chord (and its accent) *in the character of a suspension or appoggiatura,* with the chord-tone directly following (**270a**), or appear (after the manner of passing-notes) on unaccented divisions as melodic ornamentations between two notes *of the same pitch* (**270b**):

A changing-note can, therefore, enter by a leap, but it must be closely joined to the harmonic note, as the examples in No. **270** show.

From these examples we may see, moreover, that either the next note *below* the harmonic note, or the next one *above* it, can be used as a changing-note.

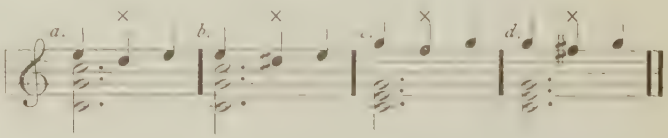
The changing-note below the harmonic note possesses a peculiar tendency, especially when it enters like an appoggiatura on an accented beat, to form a *minor second* with the chord-note; from this tendency chromatic tones result (No. 270), and so we cannot write like this:

271

This applies especially to changing-notes entering by a leap.

The matter is different when they appear in a continuous succession, when they likewise assume the character of passing-notes. Thus the following series of changing-notes at **a** does not necessarily have to be written as at **b**:

272

Such changing-notes below as fall on weak beats, require the minor second in some instances only. For instance, 273a must not necessarily take the form of **b**, whereas **c** is not so good as **d**.

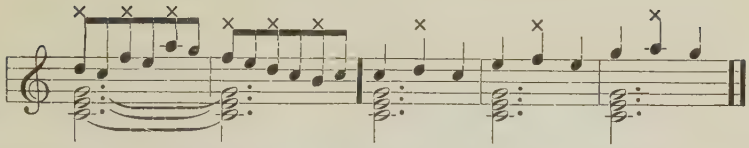
273

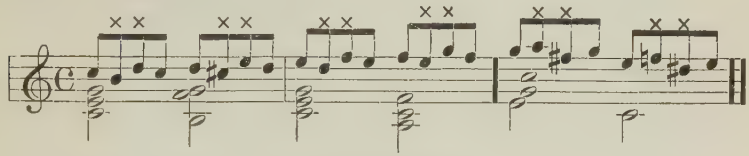


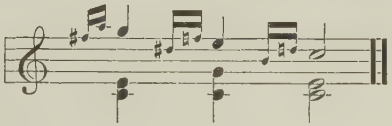
On this point positive rules cannot be given, and are needless to the extent that any musical ear will find the right way.

NOTE. — The Third of the triad tolerates the *whole-tone* changing-note more readily than either its Fifth or its octave. As the changing-note with the octave may appear as a Seventh, it can be determined only by what follows.

Changing-notes *above* the chord-note, whether entering freely (by a leap) or as shown in No. 273, may form *major* or *minor* seconds with the chord-tone according to the key or the modulation, as they always appear diatonically.

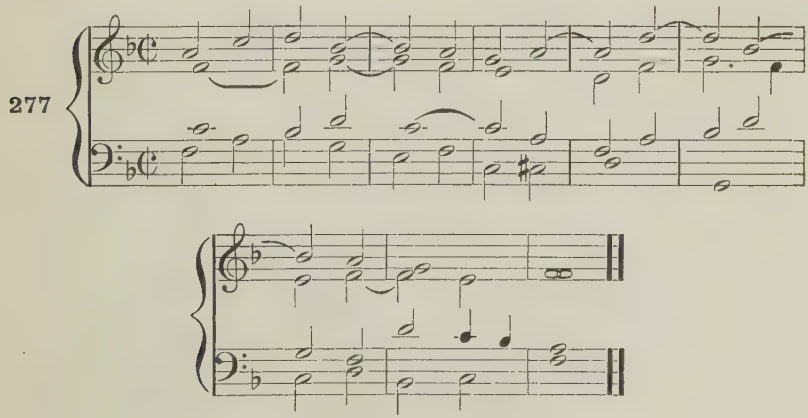
274

Figures are not infrequently met with, in which changing-notes above and below the chord-tone are used:

275

On such changing-notes is founded the familiar ornament:

276

Passing- and changing-notes may occur in any part. When they are employed in *one* particular part only, this part will have decided prominence above the rest and assume a markedly melodic character, the other parts serving as an accompaniment. When this is not the case, all the parts may be brought out in turn by the aid of these by-tones, thus gaining in importance. Everywhere that the position and progression of a part favor the utilization of such by-tones, they tend to develop its melodic significance; but take care not to overdo the matter, otherwise an overladen and unclear effect may easily result.

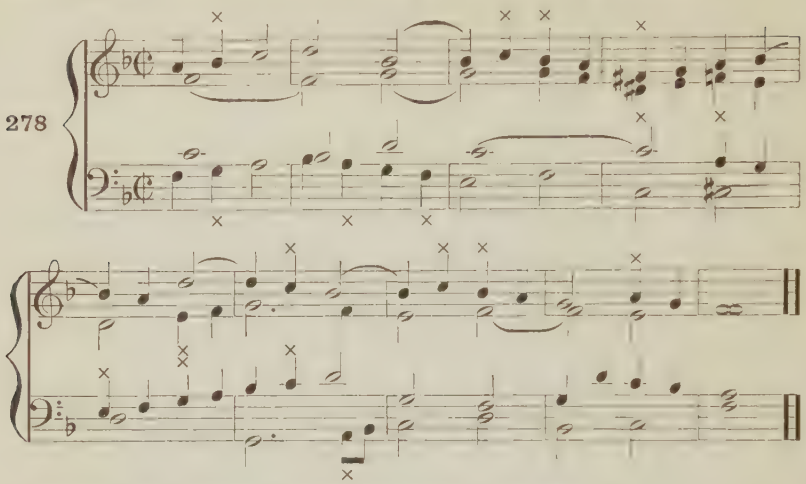
The following simple harmonic passage:

277



would appear, after the introduction of such by-tones, like this:

278

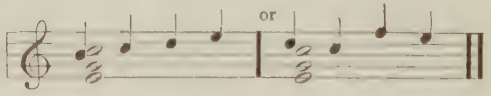


Passing- and changing-notes are marked by crosses (×).

This example shows that the musical structure may easily be overladen by such an accumulation of tones foreign to the harmony, supposing it to be performed in a rapid tempo; though in a slow movement this style of writing shows to better advantage.

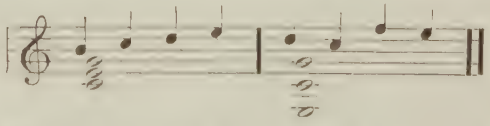
As we observed when discussing the suspension, care must be taken when employing changing-notes *that no other part already has the chord-tone which is to be introduced by a changing-note;* for illustration:

279



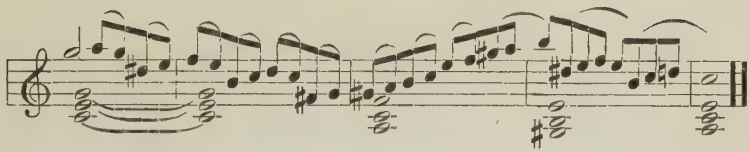
The chord-tone may, however, be present at the distance of at least an octave:

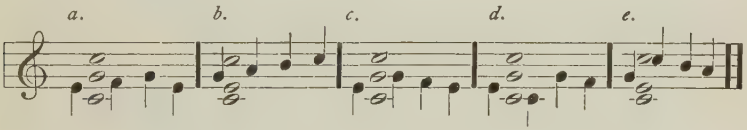
280

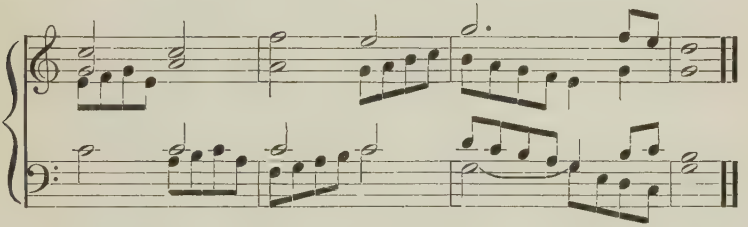


According to the general rules for doubling, the notes which it is preferable to double in this case are root or Fifth of the fundamental chord, rather than the Third.

In a comparatively quick movement and with an extended development of figures formed with these changing-notes, other considerations arise, as shown in the following passage, which, we admit, cannot pass for an example of four-part vocal writing:

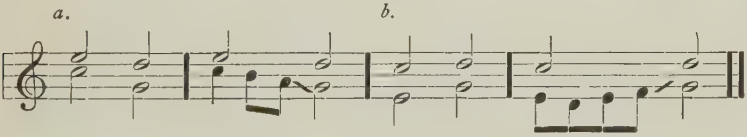
281

Similar considerations obtain in the case of regular passing-notes, with reference to their nearness to chord-tones; and figures like **282a** and **b** are not so pure as those at **c**, **d** and **e** :

282

Swifter figurations more readily permit of this approximation:

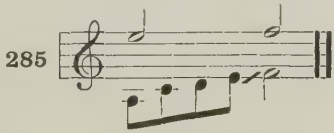
283

Incorrect Progressions with Passing- and Changing-Notes

As passing-notes are intended to fill out the vacancies caused by melodic leaps in the harmonic progressions, we must be on our guard when the harmony changes against incorrect progressions. Thus, in the next example, covered Fifths become *open* ones:

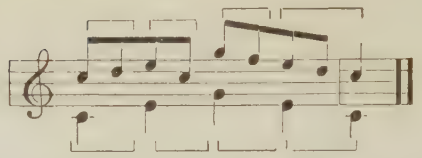
284



Open octaves formed by *passing-tones* cannot occur, because the first octave would be just as harmonic as the second:

285

Contrariwise, in the following places the passing-notes do not disguise the open octaves, and must therefore be styled incorrect:

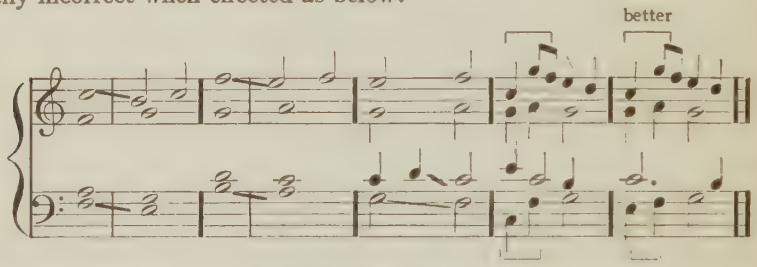
286



NOTE. — This kind of parallel octaves can be employed in *instrumental* writing where a reinforcement and doubling of the harmonic tones is premeditated.

The entrance or progression of a *changing-note* in parallel motion is equally incorrect when effected as below:

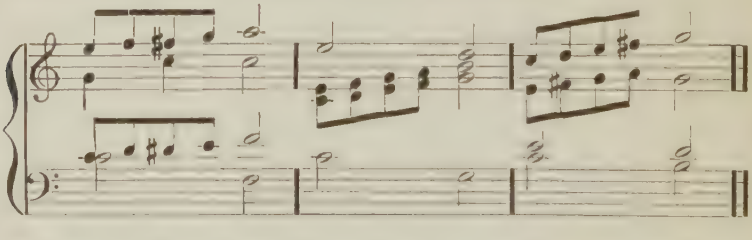
287



The last example is better because the octave-progression is disguised by the accented changing-note.

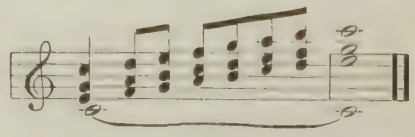
PASSING- AND CHANGING-NOTES IN MORE THAN ONE PART AND MOVING SIMULTANEOUSLY

The simultaneous movement of passing-notes in more than one part is best effected in passages of parallel Thirds and Sixths:

288

A free leading of the parts where passing-notes are employed may produce parallel Seconds, Fourths, Fifths, and Sevenths of all sorts; but they have to be introduced very cautiously, and, on account of their harsh effect, only one at a time under highly favorable conditions.

Parallel Fourths sound well when the Third below is added as a third part:

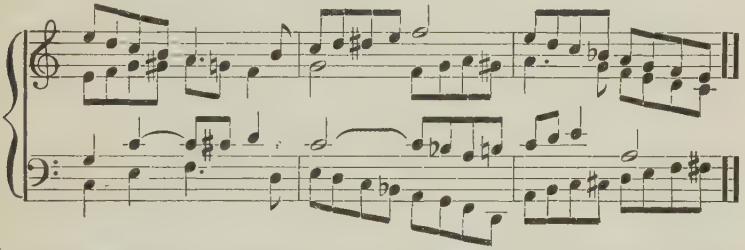
289



Isolated parallel Fifths resulting from passing-notes are occasionally met with in good compositions; but this is no reason for recommending them as correct in general. (See p. 15 *et seq.*, on Parallel Fifths.)

Similarly, the roughness of parallel Sevenths can be tempered only by a favorable position, good part-leading otherwise, and, for the rest, by tempo, movement, etc.

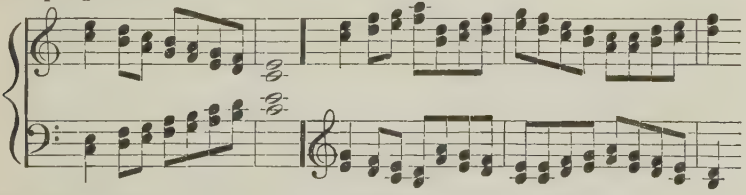
In *contrary motion* the variety of intervals formed by the passing-notes often lends the harmony a peculiar, individual color, and adds much to the independence of the parts; only they must not occur in superabundance, or in too many parts at once.

290

In such passages we shall see, again, that those passing-notes which form, as it were, the most intimate novel (passing) harmonic progression together with others (not belonging to the simple fundamental harmonic structure), have a more natural and smooth effect than those whose combination defies harmonic analysis.

The practical availability of such passages can be estimated only when the character and tempo of the composition are taken into account.

Passing-notes may occur in several parts simultaneously in regular diatonic progression:

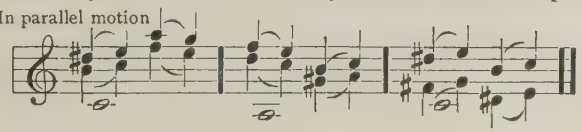
291

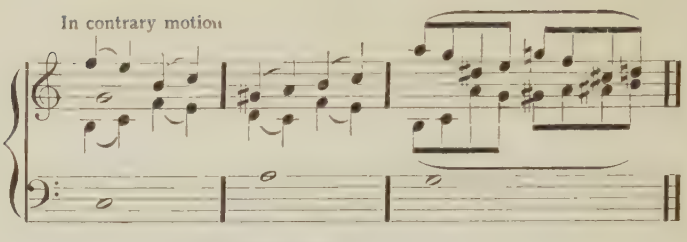


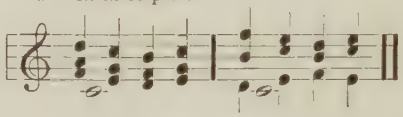
The chief concern in all such passages is that, *where the harmony changes* (as in the last example on the half-measure), the position of the parts should be such as to allow a *regular* continuation of their progression.

Changing-notes may occur simultaneously in more than one part:

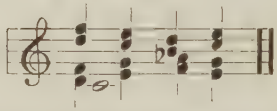
292



293

294

a. In three parts

295

b. In four parts

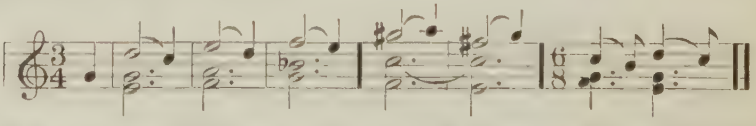


NOTE. — Most of the above examples might also be regarded as harmonic progressions over an organ-point.

These examples go to show that where two parts progress in parallel motion it seems most natural for changing-notes, too, to proceed in Thirds and Sixths, while parallel Seconds, Fourths, Fifths, and Sevenths always sound very badly. For example, probably no one would assert that changing-notes like the following are good:

296

Changing-notes may also have a greater time-value than the chord-notes to which they are joined:

297

The importance of the matters discussed in Chapters XII to XIV for the art of composition is sufficiently great to render them worthy of careful investigation; and a thorough knowledge of them contributes materially to an understanding of the inner harmonic construction of a composition. We must now discuss their relation to strict four-part harmony, the immediate object of our study.

"Strict," or "pure," harmony having been alluded to only in a general way (on p. 12), it now becomes necessary to enter more into detail; hence, we formulate the following question:

How may we employ these resources of composition for our present purpose, the exercises in strict harmony?

It is undeniable that the resources explained in this chapter are peculiarly adapted for developing and embellishing the parts.

However, since our immediate aim is to *distinguish* and *practically employ simple harmonic combinations*, we may properly use everything which is appropriate for *developing* the parts, but should dispense with whatever serves merely for their embellishment; in a word, we must discriminate between essentials and non-essentials.

As belonging to the class of non-essentials we must always reckon

(1) *Harmonic artifices of every description which do not spring from some inner necessity; the forced introduction of chord-successions unpliant in character and therefore seldom used.*

They tend to overload and over-embellish the harmonic movement, and seem like the product of a morbid or feeble mentality rather than of originality and fresh, free impulse secure in its own strength.

(2) *The irregular introduction of suspensions; the employment of sustained parts and of anticipated and after-striking tones;* and, in particular,

(3) *Changing-notes entering unprepared, and the figures resulting therefrom; — in short, everything which seems inappropriate in a simple, tuneful four-part vocal movement.*

Indeed, if we assume *vocal composition* to be the *basis* on which all music is founded, much will be excluded from it, as a matter of course, which is quite proper in instrumental writing.

For practice in using the chords and for acquiring a good, pure style of part-leading, the working out of chorales, or of simple movements in chorale-style, is suggested as the most practical material; but even the employment of this material does not necessarily exclude the use of the above resources where they serve, not simply for embellishment, but to develop the part-leading.

For this latter purpose suspensions, and the regular passing- and changing-notes, are especially suited.

It is with reference to the principles set forth above that the strictness of pure four-part harmony in our present studies, and in our later contrapuntal work, should be judged; a great deal is condemned for the present as unpractical, unessential, and as distracting attention from the main issue, which we shall be glad to utilize in practical composition.

To complete our comprehension of all the subjects hitherto discussed, a thorough analysis of good compositions will serve; for the student's own experiments Chapter XIX in Part III of this volume will afford an opportunity, and we shall then return to this matter.

CHAPTER XV

Passing-Chords

The term Passing-chords is applied to chords which appear on the *smaller divisions* of the measure, after the manner of passing-notes, in several parts, assuming the form of real chords; though their entrance and treatment may not always strictly conform to the general rules for chord-connection.

We have already seen one species in the case of certain passing- and changing-notes in three parts which assumed the form of chords, *e.g.*, in Nos. 294 and 295. And one might likewise call, in a sense, most chords "passing-chords" which are formed over an organ-point.

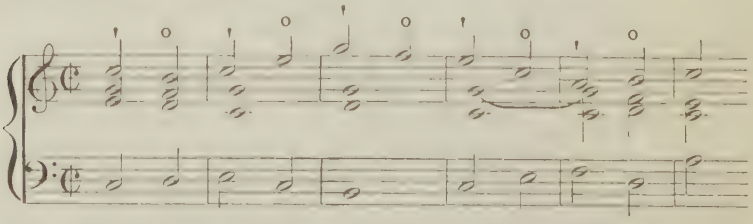
But there are other phenomena of this description which we shall now explain.

The entrance and progression of passing- and changing-notes are principally dependent on metrical relations; and so it will be necessary, for the explanation of passing-chords, to cast a glance on the different ways in which measures are divided.

In simple *binary measure*, as we know, the natural accent falls on the first beat, the second beat being less strongly accented.

Now, where the harmonic progression simply follows these two beats, the harmonies falling on the strong beat (thesis) will appear as the most important ones, and will always be regarded as the goal to which the chords on the weak beat (arsis) lead.

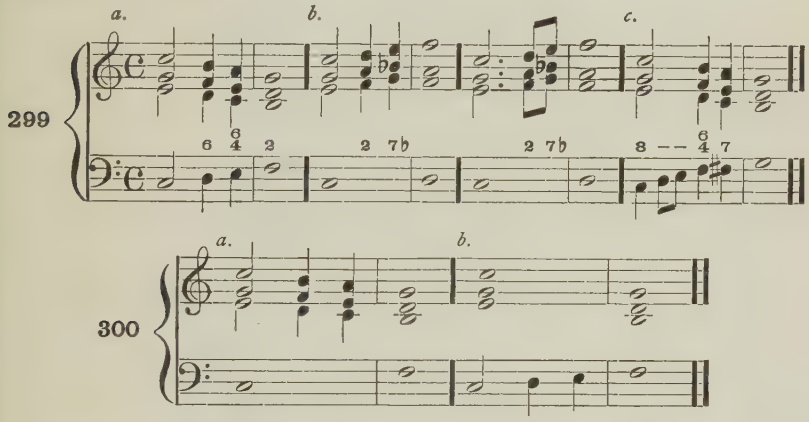
298



In this sense we can term the chords on the second beat "passing-chords," although in this uniform movement their character as such is not so decidedly manifest.

This view, though seldom plainly expressed, is accepted in theory; as is proved by the fact that chords entering on the thesis have always received more careful attention than those falling on the arsis, with which latter many liberties have been taken not allowed with the former.

But the character of the passing-chords is more clearly manifested in harmonies which fall on the lesser subdivisions of the measure, as in the following examples:

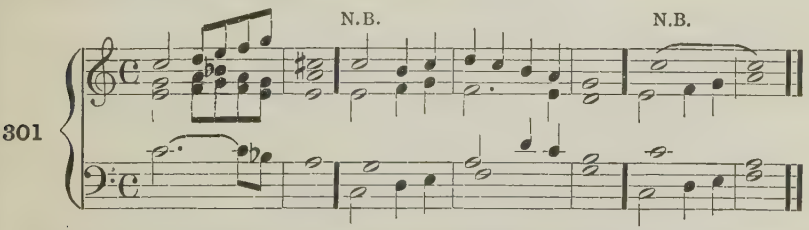


The peculiar entrance of the $\frac{6}{4}$ chord in No. **299a** and **c**, and of the seventh-chord at **c**, can be explained only *by the stepwise progression of all the parts, in the character of passing-notes, to their nearest goal*, the chord on the thesis in the next measure.

The character of these parts as passing-notes is still more clearly apparent when one part is sustained (*e.g.*, the bass in No. **300a**, or the higher parts at **b**).

The part-leading in No. **299c** results from the employment of both modes.

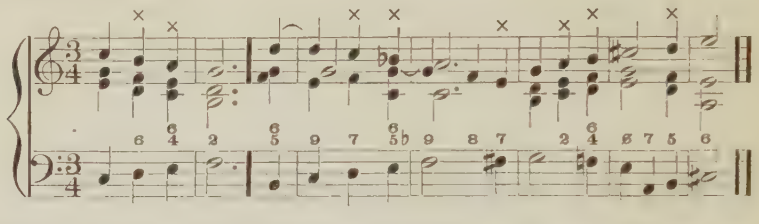
Where this condition (stepwise progression of all the parts) is fulfilled, all chords may enter freely, their progressions being justified and made intelligible by the chord immediately following.



NOTE. — This explanation of passing-chords likewise justifies the free treatment of the Seventh previously mentioned. (See N.B. above; also pp. 73 and 74.)

In simple *ternary* measure the accent also falls on the first beat, while *two* beats are now less strongly accented. Passing-chords will occur in the following manner:

302



Similarly, still smaller subdivisions of the measure may take passing-chords; these, and the various compound measures, require no further illustration. The study of good compositions will render this matter clearer, and aid progress generally.

For the student's own experiments the following suggestions are offered.

All combinations designated as passing-chords will progress either according to the familiar rules for chord-connections, or at variance with them. In the former, and more usual, case no further comments are needed; in the latter case the correctness of such progressions will depend on a flowing, melodic leading of the parts both in themselves and in relation one to the other. In general we can only say that *here, too, the stepwise progression of the parts will determine the character of the passing-chords,* and that all passages of this sort must be judged with reference to the rhythm, tempo, and general character of the piece in which they occur.

CHAPTER XVI

The Means Employed in Modulation

The meaning of the term Modulation was explained in Chapter XI.

It was then our object to define each modulation correctly. At present we have to do with the *principal means* employed for producing a modulation.

The art of modulation consists in determining the harmonies which are related to two or more keys, in order to pass from one key to another by the aid of said harmonies.

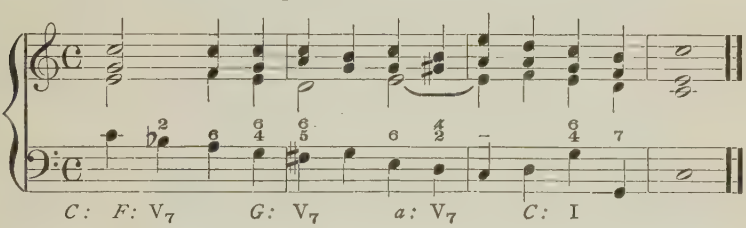
Any modulation may be effected in various ways, and may serve various purposes. It may

(1) *Enter abruptly, pass by and end rapidly,* or

(2) *Be longer in preparation, seeking the new key as its goal and adopting it as fundamental for a considerable time.*

In the first instance the modulation will employ the simplest means, enter with decision, but soon forsake the new key or not even allow it fully to establish itself. In the second instance it will usually be prepared and carried out gradually by various means, all tending firmly to establish the new key, or even leading to a close in the latter.

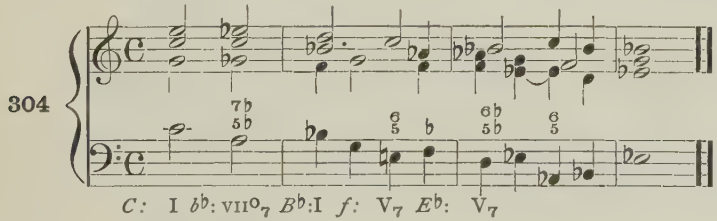
Thus, in the following example:

303

the modulation appears transient with rapid changes, without fairly forsaking the basic key of *C* major.

This kind of modulation is adapted only for the most closely related keys; although remoter keys may be reached by special and strongly marked devices, the development of such devices must proceed by means of quite natural and organic connections, otherwise they will appear unintelligible and awkward.

In the next example, on the contrary, the more remote key is the goal to be arrived at step by step; the "old key" (original key) is wholly forsaken, and the new key takes its place:

304



This example plainly shows how the extended modulation, keeping the new key in view as its goal, arrives at this latter through the employment of passing modulations — and this the rather, because the object in this case was not to reach *E*♭ major in a hurry.

Where such short passages are not to be utilized as interludes between two pieces in different keys, or as mere exercises, their introduction in composition must proceed after a special manner and plan; since upon the shaping of the modulation itself depends, in part, the form of the

periods and their subdivisions. However, this is an important detail in the Theory of Form, and belongs to the Order of Modulation in a composition; it is, therefore, foreign to our immediate purpose.

For the present we shall take up the writing of such modulations in the form of exercises, to promote skill in the use of chords and their interconnection in a practical manner.

While exploring the means of modulation we shall at first pay no attention to the *mode* of modulation; for the means are applicable to either of the above modes.

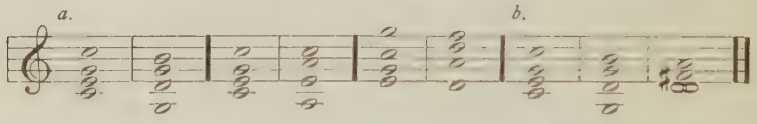
As the simplest and most directly available means,

the Tonic Triad of the New Key

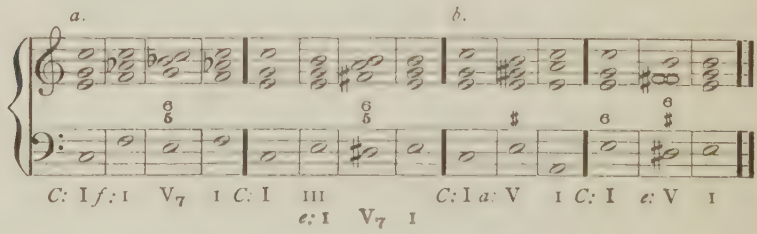
presents itself first.

But if this triad is also one of the triads belonging to the old key, the proposed modulation can be established only by succeeding harmonies and more especially by later introducing the dominant harmony of the new key. Thus, at **a** in the next examples, no modulation will be felt; whereas at **b** the third chord distinctly ushers in the key of *G* major.

305

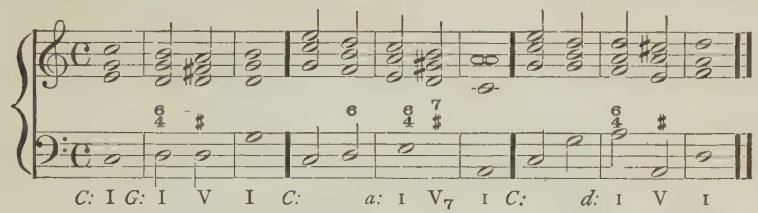


Where remote keys are concerned the *minor triad* may, to be sure, have a more decided effect as tonic triad; but even then the dominant harmony will follow it to render the impression decisive (as at **306a**); the *major triad*, on the other hand, sounds rather like *dominant harmony* (**306b**):

306

Undecided as the *tonic* triad may appear in modulatory effect when employed as above, in one of its positions, that of the $\frac{6}{4}$ chord, it has the characteristic of making a modulation particularly decisive. For, just as it naturally participates in the closing cadence (see pp. 38 and 42), its entrance gives the effect of a modulation when effected, not after the

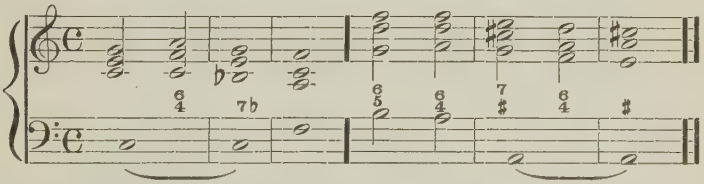
manner of a passing-chord, but on the strong beat (thesis). In this case, too, the dominant harmony naturally follows, and so completes the modulation.

307



When the $\frac{6}{4}$ chord enters on the arsis, it does not establish the key so decidedly:

308



However, all these examples point to a still more effective means of modulation. This is the

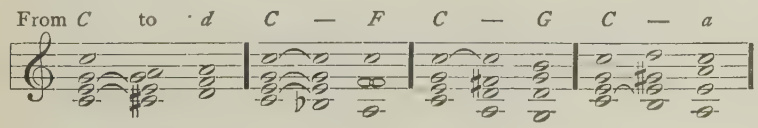
Dominant Harmony.

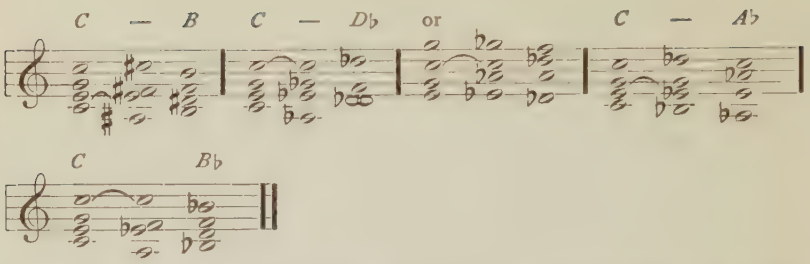
The triad and the seventh-chord of the dominant manifest themselves as the most natural and excellent means of modulation; because — and especially with respect to the dominant seventh-chord — they serve to establish the key most unmistakably.

Modulation with the dominant seventh-chord can be accomplished without an intermediate chord as follows:

According to the principle that a chord-progression is most readily grasped when effected by the aid of *common* or sustained tones (preparation), we can start with the tonic triad and modulate directly through their dominant seventh-chords into all the other keys — excepting those whose keynote is the major or minor Third of the original key, or the augmented Fourth of its tonic — when the chord-connection can be made through one or more tones of the original tonic triad. Consequently, starting in *C* major, we can reach all the other keys except those of *E*♭, *E* and *F*♯ (whether major or minor we shall leave undecided), as shown below:

309

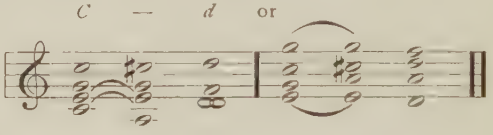




In each of these examples the transition to the dominant of the succeeding key is effected by means of common tones tied together; for instance, the tones *g* and *e*, in going from *C* major to *d* minor, are transformed to the Seventh and Fifth of the dominant harmony; etc.

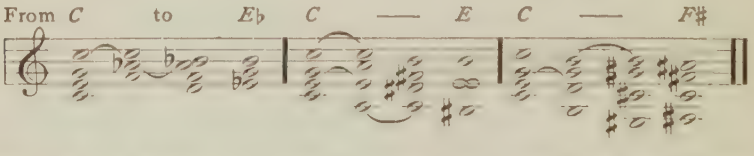
Note. — We need only to suggest that these modulations can be accomplished equally well with the chords in different positions:

310

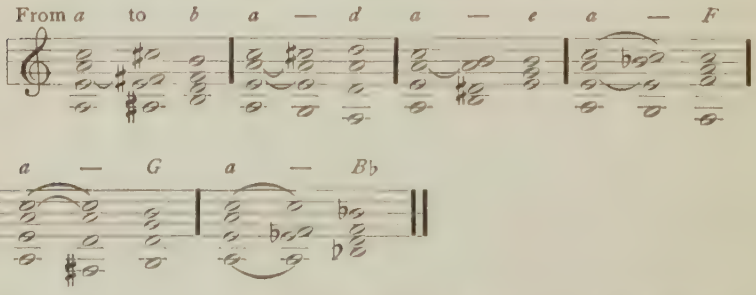


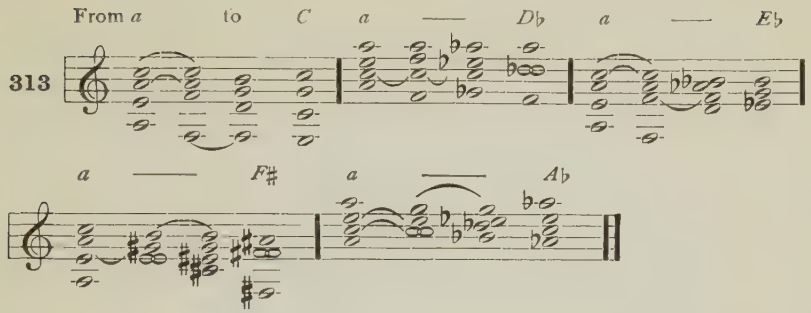
Should one wish to modulate in like manner into the three missing keys, it can be done by introducing an intermediate chord (a triad is the simplest), and thus establishing the missing connection; *e.g.*,

311

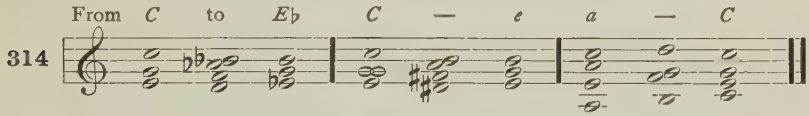


Starting with a *minor* tonic triad, the modulation will be formed thus:

312

To modulate into the keys of *C*, *D*♭, *E*♭, *F*♯, and *A*♭, a connecting chord is required:



It is self-evident that this mode of modulation is presented only as an *elementary principle*, and that a modulation does not necessarily have to be accomplished in this way. It is equally evident that, as simple chord-connections may be effected without *holding any tone over*, a modulation may be accomplished in like manner; for example, the following modulations can be made *without* an intermediate chord:



Still, for connecting either harmonies or keys, it will in any event be very profitable to acquire intimate familiarity with the workings of this principle. To this end modulations starting with every key, and with the chords in all possible positions, should be written out, and these written exercises tested audibly at the piano.

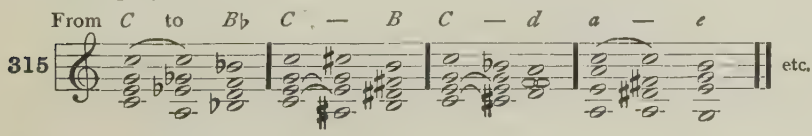
This mechanical procedure will greatly promote dexterity in handling all the resources of composition.

There is another chord which shares the capacity of the dominant seventh-chord as a means of modulation. This is the

Diminished Seventh-Chord.

This chord, which generally occurs as a substitute for the dominant seventh-chord, will not infrequently appear better adapted for modulation than the latter, because its effect is much milder, especially in cases where Seventh and root of the dominant harmony have to enter together unprepared.

The employment of the chord is illustrated below:



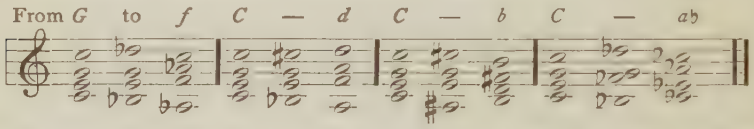
Besides the above method, this chord possesses peculiar adaptability by reason of its *enharmonic* character.

The following chord, sounding the same in each form, but differently written:

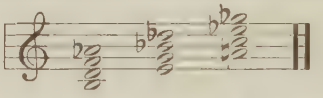
316

belongs to four different keys, namely, *f* minor (first form), *d* minor (second form), *b* minor (third form), and *a*♭ minor (fourth form).

It is consequently available for a fourfold modulation:

317 

Now, seeing that all diminished seventh-chords are included in the following three positions, exhibited most plainly on the piano:

318 

and that each of these may belong through the enharmonic change to *four* keys, modulations to and from all *twelve* minor keys can be effected, to which in many cases the twelve major keys may be added, as this chord may not infrequently be used instead of the dominant harmony in major.

Industrious practice in writing out exercises in this mode of modulation will also greatly promote the student's understanding of the interconnection of all the keys, and likewise of the vast variety of harmonic combinations.

Even though this mode of modulation often proves useful in actual composition, its frequent employment is not advisable, since its ready availability lessens its artistic value.

Similar in application (that is, through the enharmonic change), although less extended in scope, is the

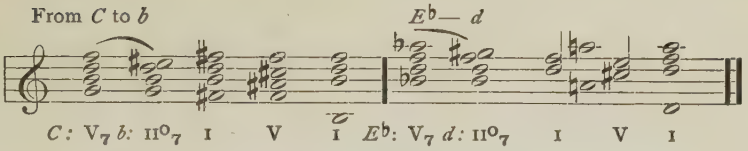
Augmented Chord of the Fifth and Sixth.

Its resemblance in sound to the dominant seventh-chord:

319

when enharmonically changed, adapts it, in connection with the latter, for modulation into certain keys. For illustration:

320

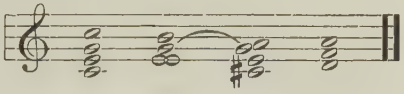


In these examples devices were sought out for passing swiftly from one key to another. But, as it will not always be desired to carry out a modulation rapidly and decisively, we may, for the development of dexterity, extend the exercises and submit them in the following shape:

To pass from one key to another by means of the triads on various degrees:

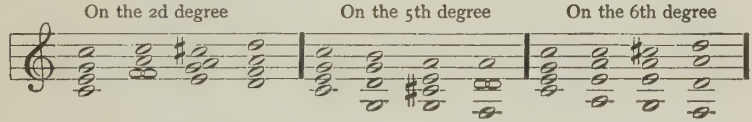
From *C* to *d* by the triad on the third degree

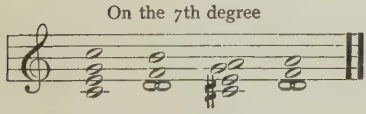
321



From *C* to *d* by the triad

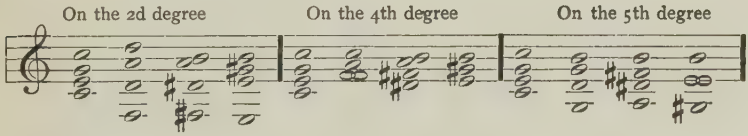
322

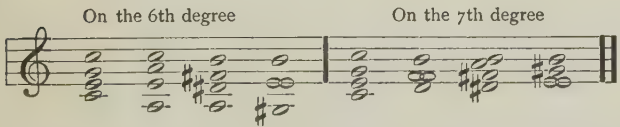




From *C* major to *E* by the triad

323





These suggestions should suffice for showing how to carry out further modulations according to the same principles.

Modulation Extended, and Completed by the Cadence

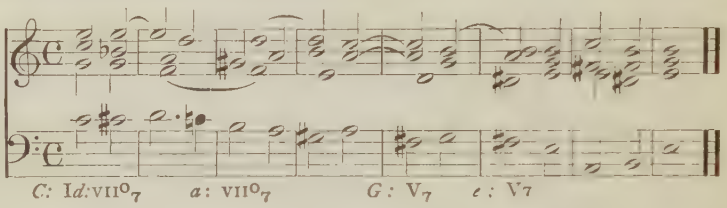
The foregoing procedure for passing from one key to another is based on the simplest and most natural devices.

Should one desire to prolong the transition into a new key, the above devices must, to be sure, likewise be employed, only not so suddenly and directly; the previously mentioned passing or transient modulation will be used, and the new key introduced gradually. This new key will, however, be most firmly established by the employment of the cadence-formulas.

For this purpose, the following form of exercise may be submitted:

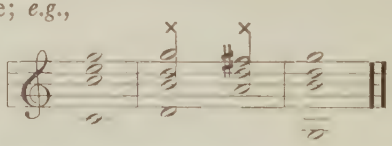
Modulate from *C* major through *d* minor, *a* minor and *G* major to *e* minor.

This exercise might be worked out as below:

324

When adding the cadence, bear in mind the following:

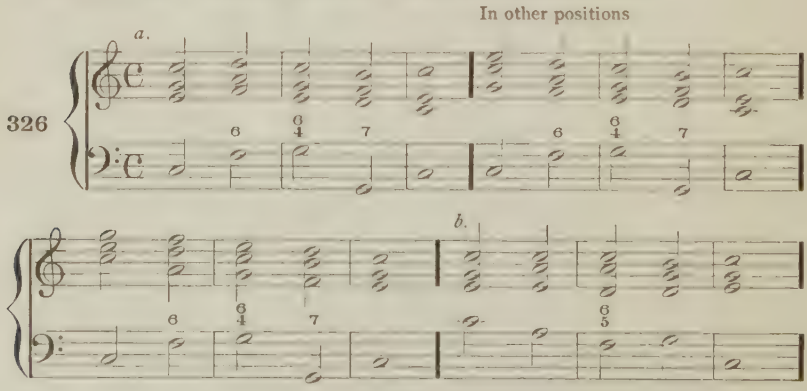
Where the modulation is effected through the $\frac{6}{4}$ chord of the tonic triad in the new key (see p. 138), its progression to the dominant harmony, and the subsequent natural resolution of the latter, will suffice to complete the cadence; *e.g.*,

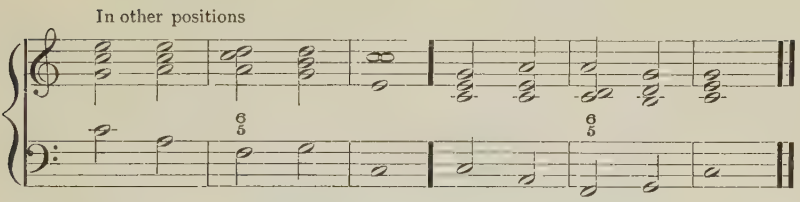
325



In other cases the *extended* cadence, or the well-known closing formulas, will be required (see p. 28) to establish the final key. As the simplest of these closing formulas, the following are in common use:

326

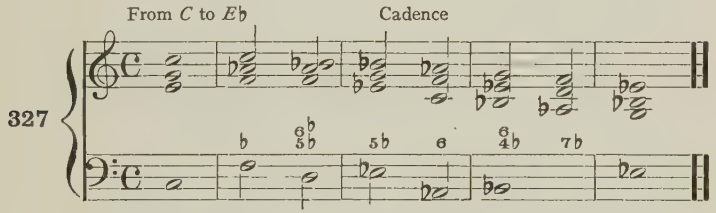




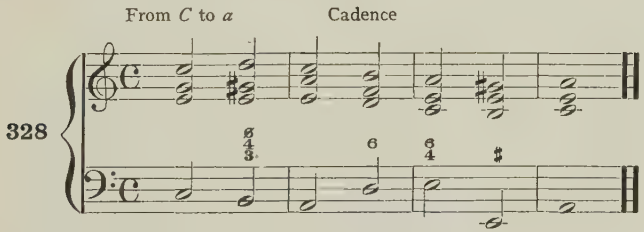
When these cadence-formulas are added so as to fit the position of the *last* chord of the modulation itself, the modulation is completed.

This shall be illustrated by some earlier examples.

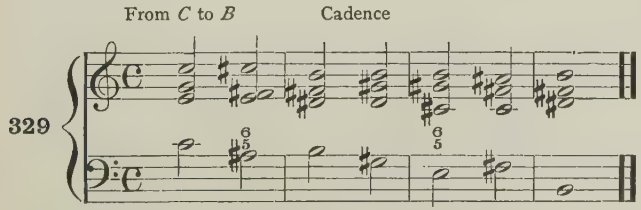
In No. **311** the modulation from *C* to *E♭* ends with the Fifth in soprano. To this the cadence is added in a position corresponding with that of the last chord:



The following modulation from *C* to *a*, in No. **309**, would call for a cadence in this position:

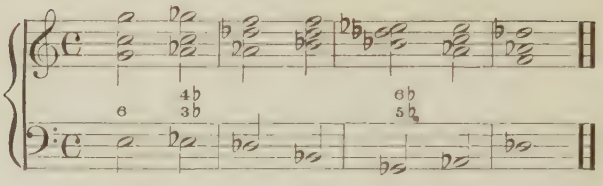


Below is the modulation from *C* to *B*, using the cadence given in No. **326b**.



or from *C* to *D*♭ Cadence

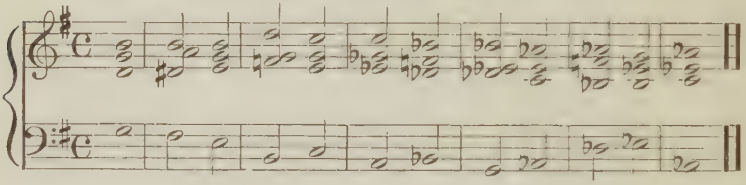
330



Finally, an example illustrating a longer exercise:

From *G* through *e* minor, *C* major and *b*♭ minor to *A*♭ major

331



These suggestions will enable the student to set himself a great variety of exercises.

PART III

Practical Employment of the Chords
Exercises for Using Them in Strict Harmony

It is the purpose of the following hints concerning the most practical kind of exercises in the employment of the chords, to give more detailed explanations of the principles and precepts already set forth, and to extend and amplify them. To this end, special cases in given examples will afford opportunity for further comments.

CHAPTER XVII

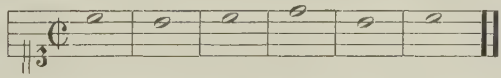
The Simple Harmonic Accompaniment of a Given Part

We may remark, to begin with, that only the simple melodic progression of a part will be considered here; all the other elements of a melody, such as its metrical and rhythmical development, being excluded.

1. Harmonic Accompaniment of a Given Soprano

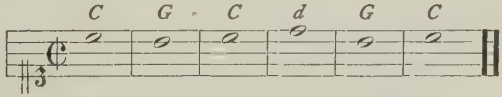
First of all, we shall take up the following simple exercise:

332



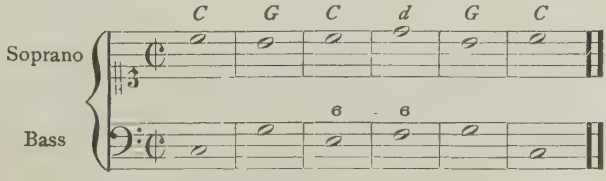
To facilitate the working-out we will indicate, in the usual manner, the root-tones which can serve as the harmonic basis.

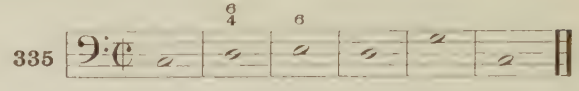
333

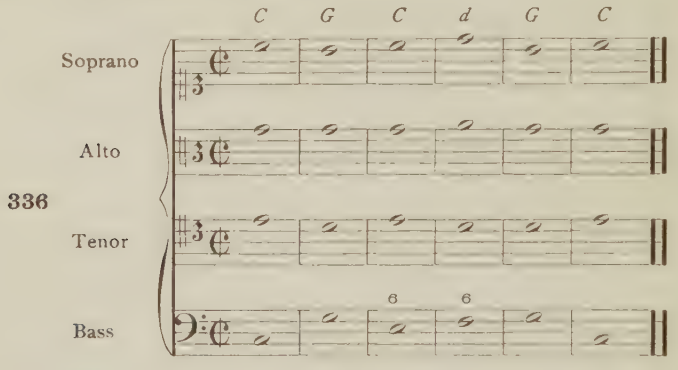


In every harmonic progression the leading of the bass is the most important.

Therefore, we shall first turn our attention to this, and write down its progression thus:

334

or in the following manner:

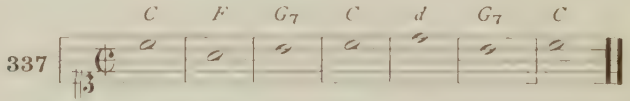


Now the addition of the inner parts will present no difficulty; for example, to the bass in No. 334.

This solution may serve, for the present, as an explanation of the exercises themselves.

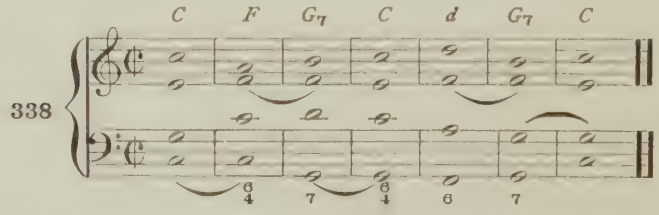
From the next exercises the student may learn the rules for a good leading of the bass and for melodic part-leading in general, so far as the simplest harmonic progressions are concerned.

For this purpose, examples which have been wrongly worked out will serve best.

Exercise with the chord-roots marked.



NOTE. – In the working-out of this and the following exercises we use the *G*-clef and write the parts on two staves, to save room. For the student's own work, however, we urgently advise the mode of notation shown in No. 336.

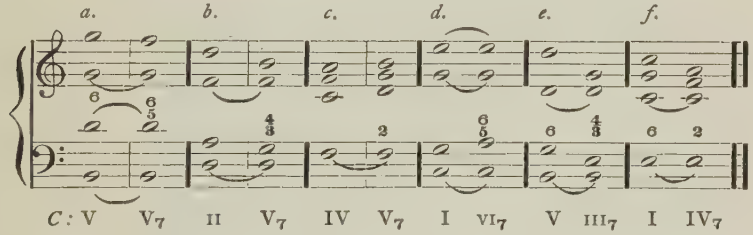
We shall complete No. 337 in this way:

Nowhere in this example can a violation of the rules already formulated for progression and chord-connection be found; and yet, on account of the awkward, uncertain, and feeble bass, it must be condemned altogether.

Excepting with an organ-point, a good harmonic leading of the bass allows tones to be held over only when this is necessary for preparing a tone, or when the effect of the pause is counteracted by a decisive progression in the other parts.

For the further elucidation of this point we add, that

All inversions of the seventh-chord, particularly of the dominant seventh-chord, may — or rather, must — be occasionally prepared.

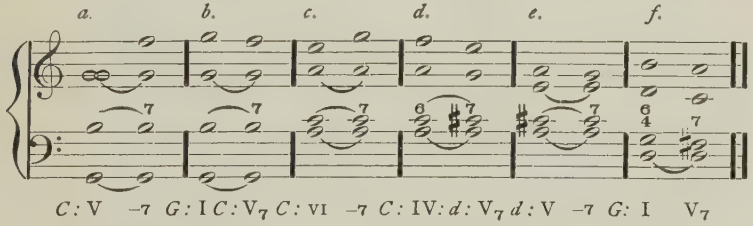
339



In all these cases the holding over of the bass is entirely justifiable. True, the $\frac{6}{5}$ chord is always most effective when it enters unprepared.

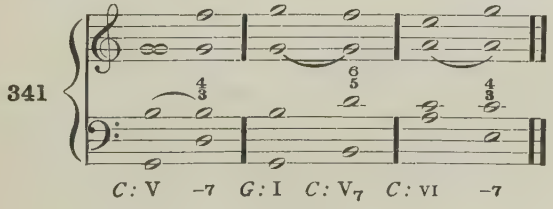
Even the root of the seventh-chord may be prepared in the bass where the Seventh enters by a skip or step:

340



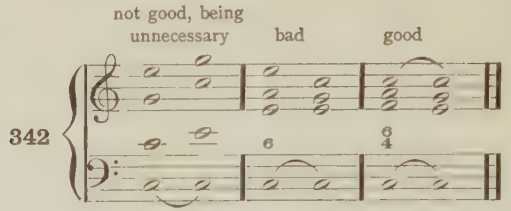
There is, to be sure, no *necessity* for preparing the root in the bass except at **d**, **e** and **f**; in the remaining examples it is also prepared in the other parts, and in this case it is advisable to let the bass move on, something like this:

341

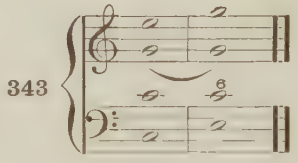


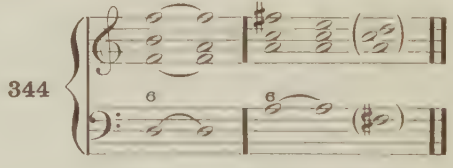
Be careful, on the other hand, not to prepare the root of the ordinary triad — except by the $\frac{6}{4}$ *chord:*

342

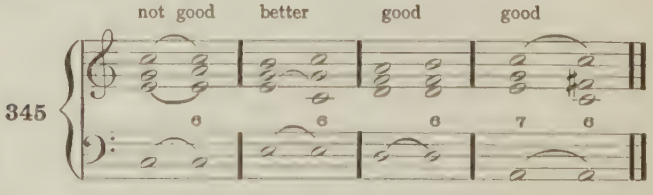


Example **342a** is not good for the special reason that the bass might easily move onward:

343

Example **b** is bad, like any preparation of the root by the chord of the Sixth; the only possible exception being the diminished triad:

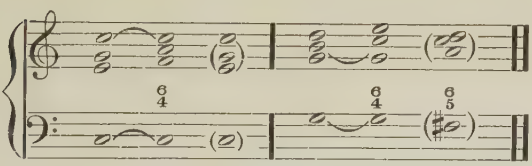
344

C: VII° II *G:* VII° II (V_7)

The preparation of the chord of the Sixth also has a weak effect in many cases, and should be avoided wherever possible. The sixth-chord of the diminished triad, however, forms an exception; its preparation may be unreservedly commended.

345

C: I VI III I II VII° *G:* II_7 VII°

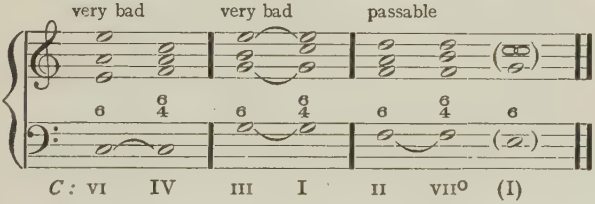
Contrariwise, the preparation of a $\frac{6}{4}$ *chord by a bass tone is permissible* when otherwise the rules are followed which control the employment of that chord (compare p. 151 *et seq.*):

346



But the preparation of the $\frac{6}{4}$ chord by a chord of the Sixth must be sedulously avoided — though here the diminished triad again forms an exception:

347



Touching the last instance, refer to the remarks on p. 153.

The chord of the *Fourth and Sixth* also occurs twice in Ex. No. 338; and this affords an opportunity for adding further details concerning this peculiar and difficult chord.

How to Use the Chord of the Fourth and Sixth

The reason for the infrequent employment of the second inversion of the triad, the $\frac{6}{4}$ chord, is that its introduction depends on certain conditions.

We find it oftenest in *cadential combinations*, as shown in previous examples.

Furthermore, it assists in a similar character *in modulation* (see p. 138).

In either case it may enter unprepared, but is then not to be considered as a passing-chord, as it *must always fall on the thesis.*

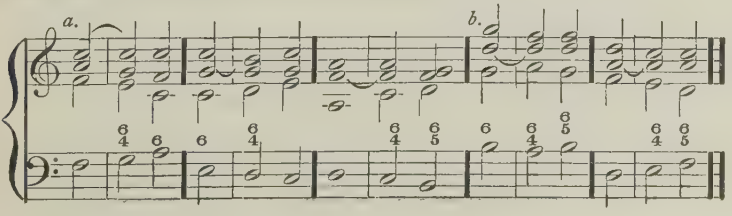
Except in these cases, it appears most naturally as a *tonic, dominant* or *subdominant triad* under the following conditions:

(*a*) *When the Fourth is prepared;*

(*b*) *When the bass either proceeds stepwise to the next new chord, or is held over.*

The subjoined examples show the application.

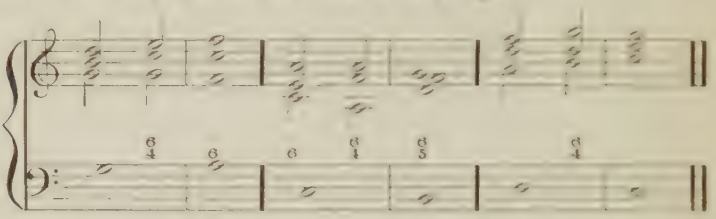
348



The effect is most natural in the first three examples (a), because the chord rests on tonic, dominant and subdominant; whereas on other degrees (b) it is likely to give the impression of a modulation.

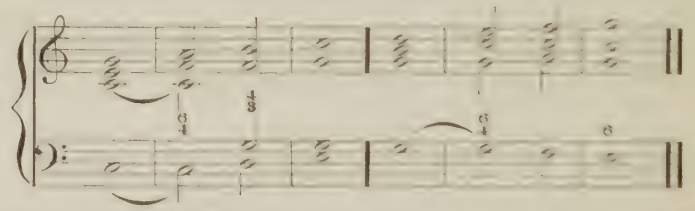
Introduced on the arsis, it may occur both under the above conditions *and when the bass is prepared* (see remarks on p. 150).

349



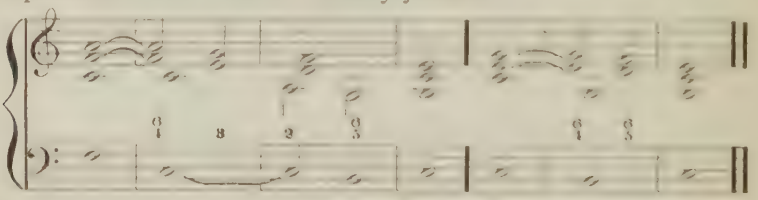
In all these examples the $\frac{6}{4}$ chord presents itself either as a passing-chord (on the arsis), or, as above, in the shape of a suspension (on the thesis); whereas it has a much weaker effect on the thesis when the bass is prepared:

350



The four-six chord itself occurs quite often as a suspension; and then the preparation of the Fourth is entirely justified:

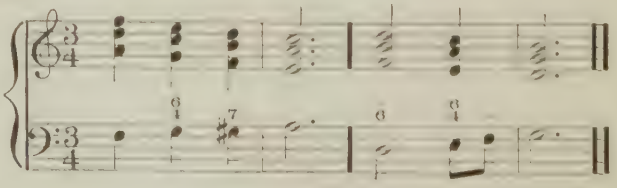
351



and most strikingly in the second example, because it enters on a chord seldom used (that on the third degree).

Where chords on the smaller subdivisions of the measure progress by steps, the $\frac{6}{4}$ chord may likewise be introduced without preparation as a passing-chord:

352



a fact according to further explanation in view of what was said about passing chords in Chapter XV, and the illustrations in Nos. 299 and 302.

Note. — The frequent necessity of preparing the perfect Fourth in the $\frac{6}{4}$ chord has occasioned some theorists to class it among the dissonances.

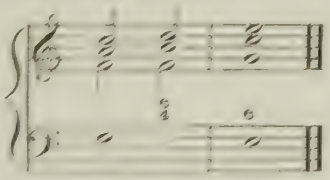
In the classification of the intervals in the Introduction to this Manual, it was set down (p. 9) among the consonances, on p. 8 the reason for doing so was given.

The frequent occasion of the perfect Fourth, and the necessity for its preparation, are questions only with reference to the bass (or the lowest tone), and confined to the $\frac{6}{4}$ chord, and even in the chord of the Third and Fourth a necessity for preparing the Fourth does not always exist. When occurring between the other parts, the perfect Fourth is to be treated precisely like any other consonance.

With the true dissonances this is not the case, for they retain their character everywhere, whether they appear above, or below, or in the middle.

The $\frac{6}{4}$ chord of the diminished triad will seldom be available in four-part writing, its effect being too unsatisfactory:

353



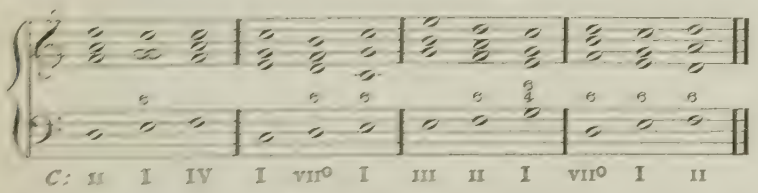
On the other hand, it will be used in three-part harmony, where it is not infrequently substituted for the chord of the Second. (Refer to "Three-part Harmony," below.)

How to Use the Chord of the Sixth

Although the introduction of the chord of the Sixth presents fewer difficulties, and permits of greater freedom, than that of the $\frac{6}{4}$ chord, it is often employed incorrectly.

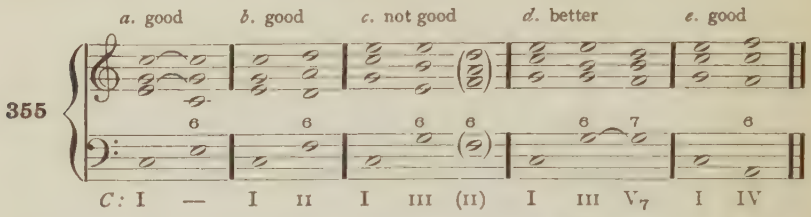
Any stepwise progression to and from the chord of the Sixth is allowable; even should the bass tone (the Third in the triad) be doubled in this case, though we otherwise prefer to avoid it, little or no harm will be done.

354



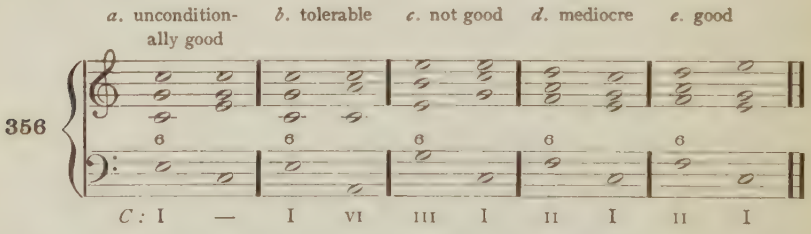
All these examples are good and available.

The introduction of a chord of the Sixth by a skip in the bass from a root can also be commended in most cases:



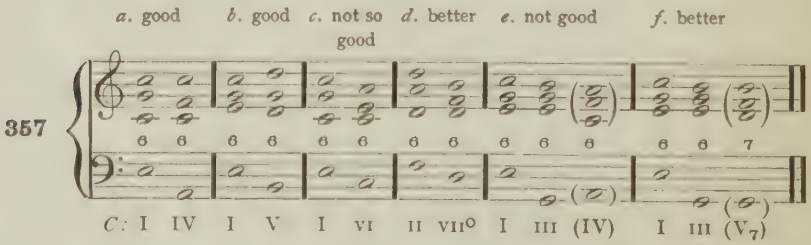
Example **c**, where the bass skips upward by a Fifth into the chord of the Sixth, certainly does not sound well; but Example **d**, in which the bass progression is the same, is satisfactory, because *e* in the soprano has the effect of a suspension, and the resolution is made to the dominant chord of the Seventh.

The reverse bass progression, however, from Sixth to root, demands greater caution:



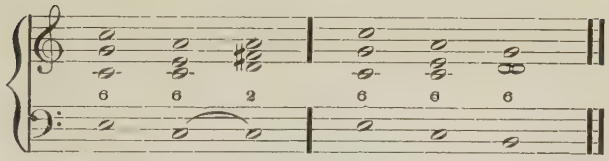
Example **e** is more satisfactory than Exercise **d** for the reason that in the former the tone *d* may be conceived as an intermediate tone between *c* and *e*, and so the effect resembles that of a plagal close (see Chapter XXVI, "Forms of the Musical Close").

A leap from a chord of the Sixth to another chord is always correct when (*as in No.* **357a** *and* **b**) *the bass tones form the interval of a Fourth above and a Fifth below, or a Fifth above and a Fourth below.*



Example **c** should be employed cautiously, and can be commended only in combinations like these:

358



the chord of the Sixth *c–e–a* entering here only as an intermediate chord (passing-chord) between the subdominant and dominant (or tonic) triads.

The leap from the chord of the Sixth on *f* to the chord of the Sixth on *d* is usable, because the introduction of the first inversion of the diminished triad — as we have often said — has a comparatively mild effect, and is, therefore, subject to fewer limitations.

Example **357e** becomes available when, as at **f**, the chord of the Sixth on *g* is followed by the seventh-chord on *G* with the bass held over (see Exercise **355d**).

Finally, with respect to the leap from a $\frac{6}{4}$ chord to a chord of the Sixth, or vice versa, it will depend on the rules governing the entrance and progression of the $\frac{6}{4}$ chord.

Besides the given condition of a good harmonic progression, that the leading of the bass must in itself provide a good and sensible basis, the second requirement is, that

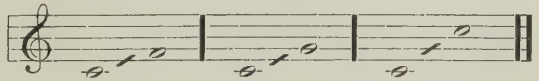
the progression must also be melodic.

This affords an opening for discussing the admissibility of the various intervals in melodic progression.

The Melodic Progression of the Intervals

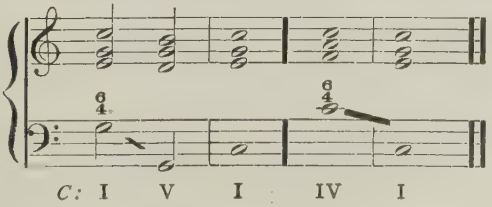
(1) *All the perfect intervals may be used:*

359

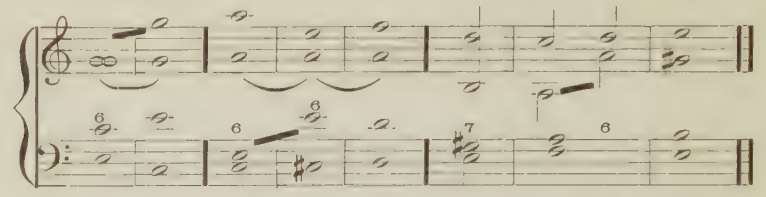


The skip of an octave is most commonly employed in the bass:

360

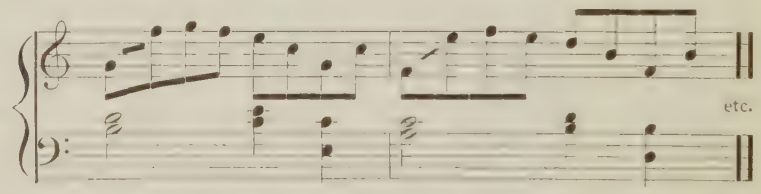


But the following examples show that octave-skips may also occur in the soprano or an inner part:

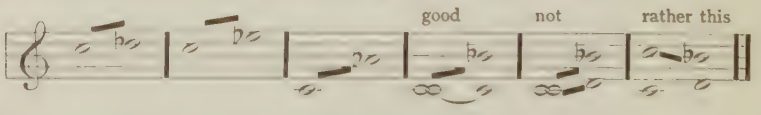
361

(2) *All the major intervals are allowable in melodic progression except the major Seventh, for which its inversion, the minor Second, has to be substituted.*

362

NOTE. — A sequence may cause an exception in this case, as in so many others. Passages like that below often occur:

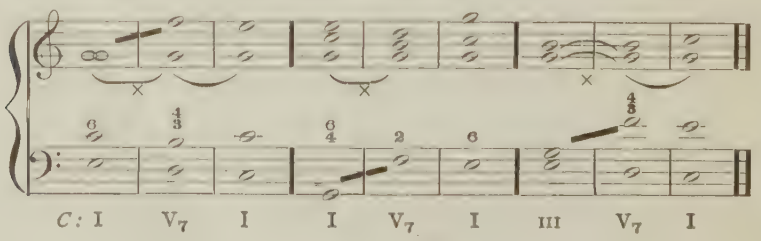
363

(3) *All the minor intervals are allowable in melodic progression; but the skip of a minor Seventh should be prepared by the root. Where this is not feasible, take the major Second instead of the minor Seventh:*

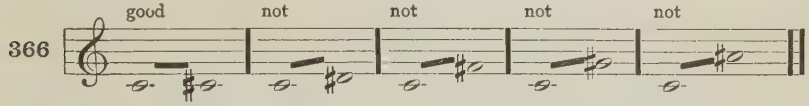
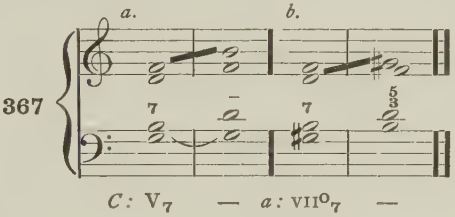
364



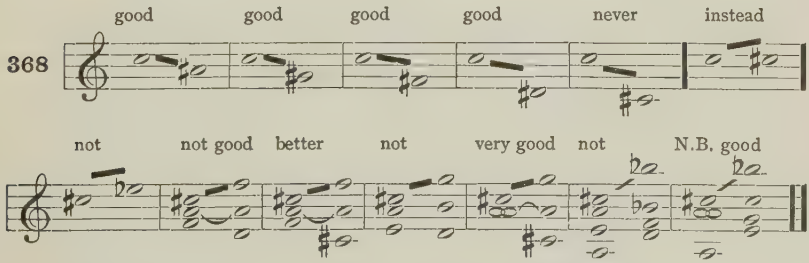
The following chord-connections in which the skip of a minor Seventh occurs, may be cited as especially available:

365



(4) *Augmented intervals should be avoided in melodic progression, excepting the augmented prime, which is nothing more than a chromatic elevation of the natural tone.*

NOTE. — Exceptions to this rule are to be permitted in the case of a progression within the same chord — that is, when the root remains the same:

Concerning the skip of an augmented Fourth, known under the name of the "tritone," and the only augmented interval found in the major scale, we shall have more to say further on.

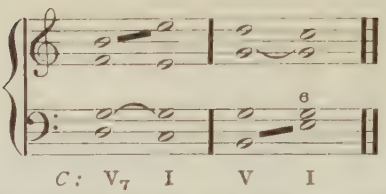
(5) *The melodic progression downward of diminished intervals is allowable, excepting the skip of a diminished octave, for which the augmented prime should be substituted. In upward progression they require cautious treatment, and should generally be introduced only when the given diminished interval is a member of the following chord — that is, chiefly when the root-tone remains the same.*



The last example, marked N.B. and designated as "good," would appear to violate the rule. But it must be observed that the tone $b\flat$, in the diminished seventh-chord $c\sharp$–e–g–$b\flat$, enters in connection with the triad A–$c\sharp$–e as a Ninth, so that A is to be imagined as root of the chord.

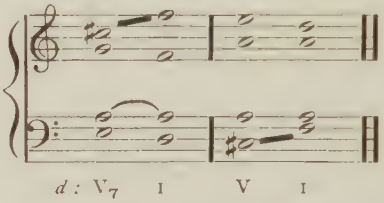
NOTE. — The skip of a diminished Fourth upward is, however, entirely allowable in one case, namely, between the leading-tone and the Third of the tonic triad. We know that chord-progressions like these

369



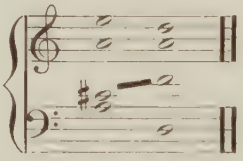
(as set forth on p. 60) are perfectly melodic and permissible; but here the melodic skip is a *perfect* Fourth. In minor this skip becomes a diminished Fourth:

370



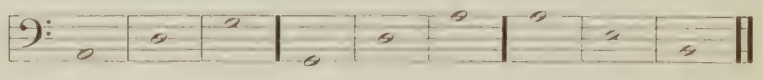
Still, these leadings are likewise good and melodic, and — at least as far as soprano and bass are concerned — unconditionally allowable. For the inner parts, this leading is less desirable:

371

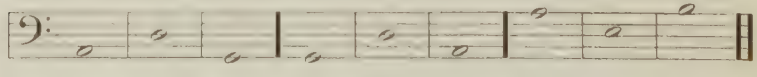


Here the melodic effect of the skip is lost, and the singer is burdened with an added difficulty. Nevertheless, hundreds of instances of this very case might be quoted from the works of J. S. Bach.

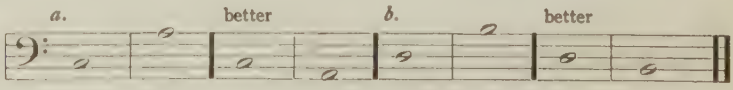
Furthermore, the succession of two Fourths or Fifths in the same direction is also held to be an unmelodic progression:

372

These skips may be improved thus:

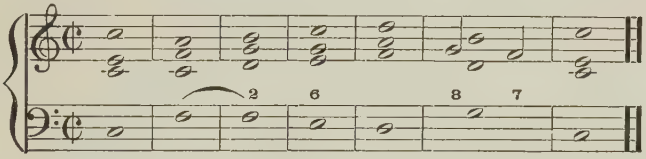
373

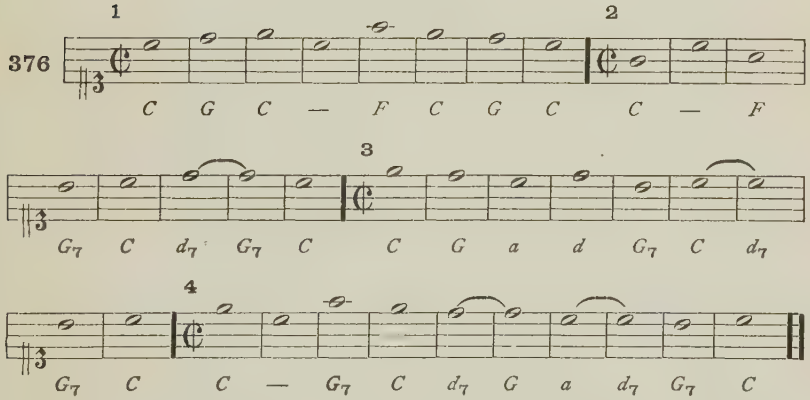


Even leaps of a Sixth may often be improved by substituting a Third in contrary motion, when the position of the chord and the range of the voice permit:

374

These observations embrace the *principal features* of a good melodic part-leading, and will suffice as a guide in our next simple harmonic exercises. It should be said, moreover, that these rules apply not merely to the leading of the bass, but to that of all the parts in general.

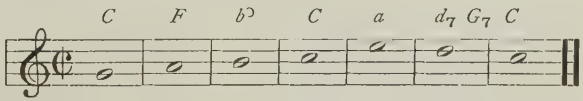
Example **337** may be worked out, with a better bass-leading, like this:

375

EXERCISES

376

Our next example will assist in explaining an important and difficult point in harmonic progression and part-leading.

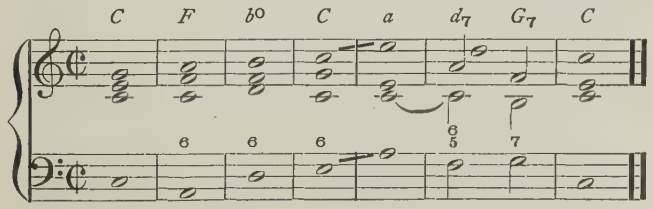
EXERCISE

377



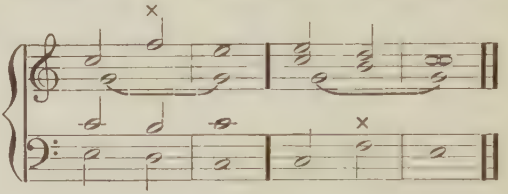
The following incorrect working-out is given for the sake of illustration:

378



The mistakes in this solution consist, first, in doubling the Third of the second chord in the bass, thus unnecessarily bringing this chord and the next into an awkward position; secondly, in the suggested covered Fifths between measures 4 and 5; lastly, in introducing the Seventh by a skip in meas. 6.

With regard to this last case, remember that the dominant Seventh can enter by a skip only when the root is prepared (see p. 62).

379

The free entrance of Seventh and root *in contrary motion*

380

is practically available. *In parallel motion*, however, it is not particularly good, and is to be used only when the chord-movement is otherwise especially favorable, as in the first example in No. 381, where the root *G* may be supposed to be present in the preceding chord, even though in another part:

381

The first of the above-mentioned mistakes shall be corrected later; the second is of greater importance, and gives us occasion to discuss

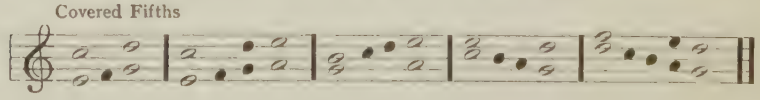
the progression of covered Fifths and Octaves

in general. (We have already touched on the character of these progressions on p. 18.)

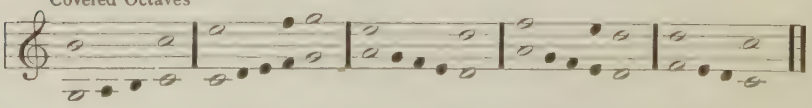
Covered Fifths and octaves ensue *when two parts progress from some other interval, and in parallel motion, to a Fifth or an octave.*

382

Covered Fifths



Covered Octaves



The Fifths and octaves are made evident by filling in the intermediate tones between the extremes of the skip in one or both parts, as shown above by the black note-heads.

In any four-part movement certain covered Fifths and octaves may occur, without which the choice with regard to chords and part-leading would be greatly limited; while others, again, should be avoided. Consequently we must, first of all, more closely examine the *manner* of their entrance. No one has succeeded, as yet, in formulating positive rules for their employment which are applicable in all cases, and probably no one will ever succeed in doing so; we shall, therefore, only offer some general observations, which will serve, however, as a standard of criticism in special instances.

Covered Fifths and octaves can occur between two parts

(1) *When one part moves stepwise, and the other skips;*

(2) *When both parts skip.*

In the former case:

(*a*) *By a step in the higher part, by a skip in the lower.*

(*b*) *By a skip in the higher part, by a step in the lower.*

With reference to the parts involved in either case:

(*a*) *Between the outer parts;*

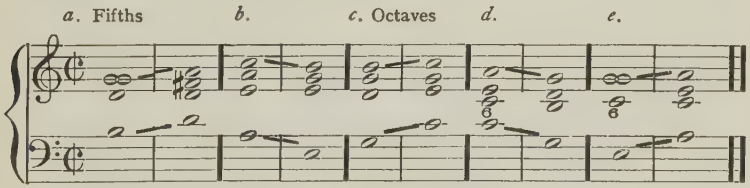
(*b*) *Between the inner parts;*

(*c*) *Between one outer and one inner part.*

Covered Fifths and Octaves Between the Outer Parts

They are unobjectionable *when the higher part progresses stepwise, and the harmonic connection is properly effected:*

383



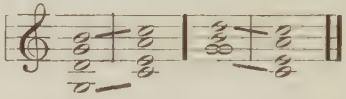
In such progressions it is well to lead one part in contrary motion to the rest, or to sustain it (see examples **a**, **b** and **c**, above). The effect is not so good when all the parts progress in parallel motion (**d**).

Note. — Though this rule will apply in numerous instances, it does not hold good in all, as **383d** proves. This example cannot be classed among those which exhibit excellence in part-leading, the progression from the chord of the Sixth on *C* being in itself a constrained one; the natural bass progression would be *c–b* (chord of the Sixth). Compare No. **356d**.

The student is also reminded of the remarks on pp. 24 and 25 concerning the cadencing progression of the bass; namely, that covered octaves "over the leading-tone," or, in general, "over a semitone," are always better than those "over a whole tone."

In all the above illustrations the octave is given as the *root* of the chord. When it forms the Third of the chord, the case is decidedly more critical, and requires more careful handling. For example,

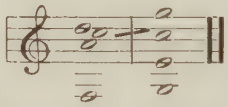
384



NOTE. — In such cases the rules will apply which were formulated for the employment of the chord of the Sixth (see pp. 153 *et seq.*).

Neither can it be considered desirable when entering as the Fifth of the chord:

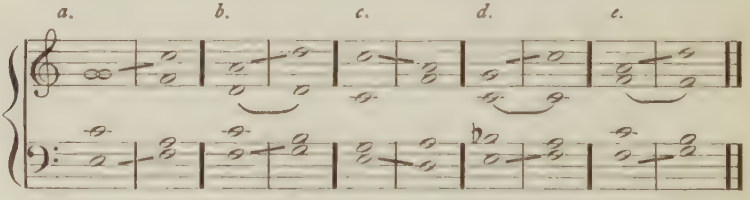
385



NOTE. — Where covered Fifths occur, the *lower* part will, of course, always be the root of the chord.

Covered Fifths between the outer parts are to be rejected when the higher part skips:

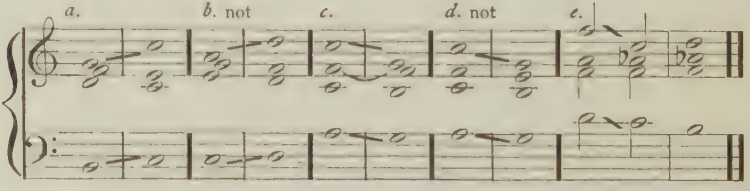
386



Wherever a Seventh forms the harmonic connecting-link, as at **b**, **d** and **e**, the effect of the covered Fifths is more disguised and less harsh; and similarly when the Fifths occur in *downward* progression, as at **c**.

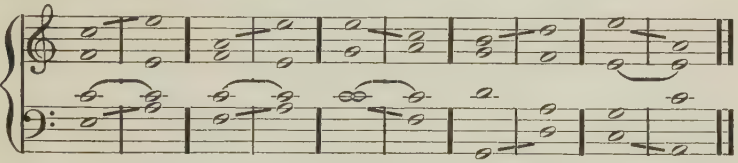
Covered octaves in the outer parts are not to be unconditionally rejected, when the higher part skips:

387

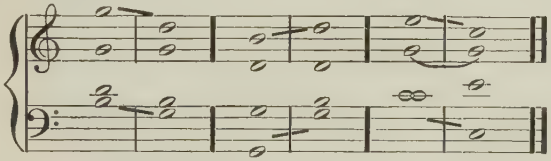


In this case, again, the progressions sound best in which (as at **a**) the bass proceeds by a semitone. As to **d** and **e**, the observations on Nos. **384** and **385** apply.

Covered Fifths and octaves between the outer parts are to be rejected when both parts skip:

388

But where they form mere *transpositions of the same chord* they are not to be regarded as incorrect; for then they are not Fifths or octaves "progressing to *another* chord."

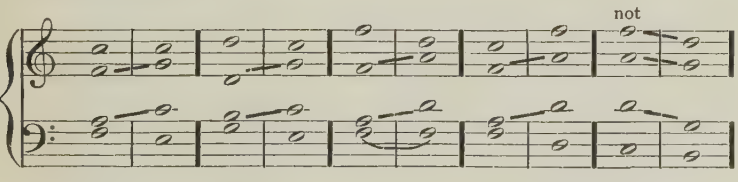
389

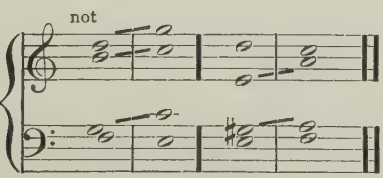


Covered Fifths and Octaves Between the Inner Parts

Although the leading of the inner parts must be just as pure as that of the outer parts, their position between and decidedly covered by these latter sometimes allows them greater freedom, particularly with respect to covered Fifths. Covered octaves cannot be commended between inner parts, even when only the proper relation of the parts is considered; for covered Fifths, besides an observance of the above-mentioned rules, an otherwise correct harmonic progression is the principal point. Below are a few illustrations:

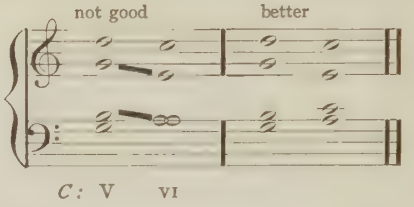
390





But there is one particular covered Fifth, resulting from the connection of the triads on the fifth and sixth degrees when the leading-tone is led downward, which must be avoided even between inner parts:

391

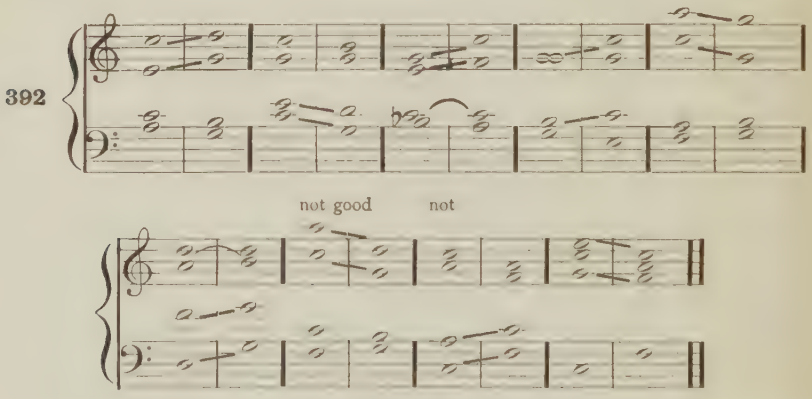


In such cases the Third in the second triad has to be doubled.

Covered Fifths and Octaves Between an Outer and an Inner Part

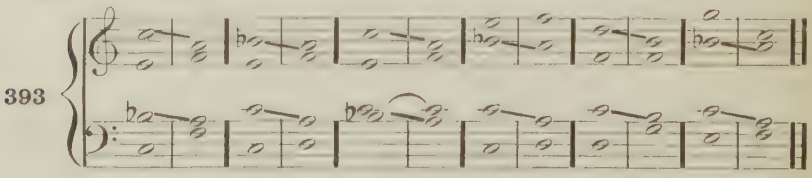
As before, we now have rather to consider the correctness and naturalness of the harmonic progressions, than to attempt the formulation of merely mechanical rules. For illustration:

392



A peculiar kind of covered octave has still to be mentioned, namely, the one carried downward *over the Seventh* and doubling its resolution. It is incorrect between any two parts, and must be avoided.

393



Our remarks on covered octaves apply equally to *covered unisons*. Between soprano, alto and tenor they should always be avoided; between

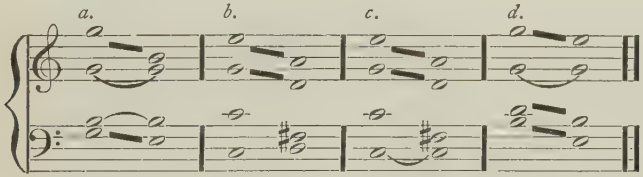
tenor and bass, however, they must be treated, according to the situation of the chords and position of the parts, like covered octaves.

Covered Fifths and octaves may occur in so many different ways that it would lead us too far, even were it not impossible, to mention them all. To the preceding illustrations we shall, therefore, add only the following precepts; premising, that they are not intended for beginners still occupied with the study of technical construction, or the mechanico-harmonic structure proper, and who have not arrived at a consideration of higher artistic requirements:

Avoid covered Fifths and octaves whenever you can; but regard them as unobjectionable when, on the one hand, the harmonic connection is otherwise good and natural, or, on the other hand, when considerations of a higher nature supervene, such as an improvement in melodic progression, the employment of special motives, and the like.

NOTE. — Progressions of this sort, more especially in the case of covered Fifths, are safer, on the whole, when the parts move *downward*. So, while it is advisable to observe the above rules as strictly as possible where *ascending* progressions are concerned, in the opposite case many chord-connections may be permitted which are forbidden by a literal construction of the rules. In the following examples:

394

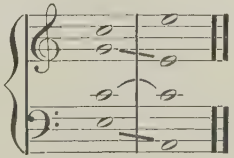


the first one sounds admirably, although both parts skip. Example **b** is not good, while **c** is tolerable, because in such cases (as we have repeatedly observed) the Seventh makes the effect *smoother*. Even example **d**, in which a covered Fifth coincides with a covered octave, might pass under certain conditions, probably owing to the fact that, as in example **a**, *two* common tones are present.

After this digression, let us return to No. 378, in order to correct the mistakes we have noted.

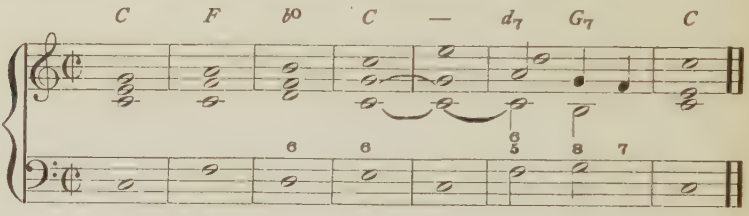
Here the covered Fifth, which is one of those where both parts skip, can hardly be avoided; because, even should the bass progression be written in contrary motion, the difficulty would reappear in another place; for example:

395

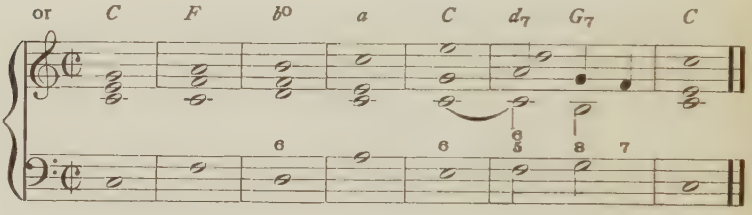


In this case, therefore, our only resource will be to change the harmony itself and choose a different relation of the root-tones.

396

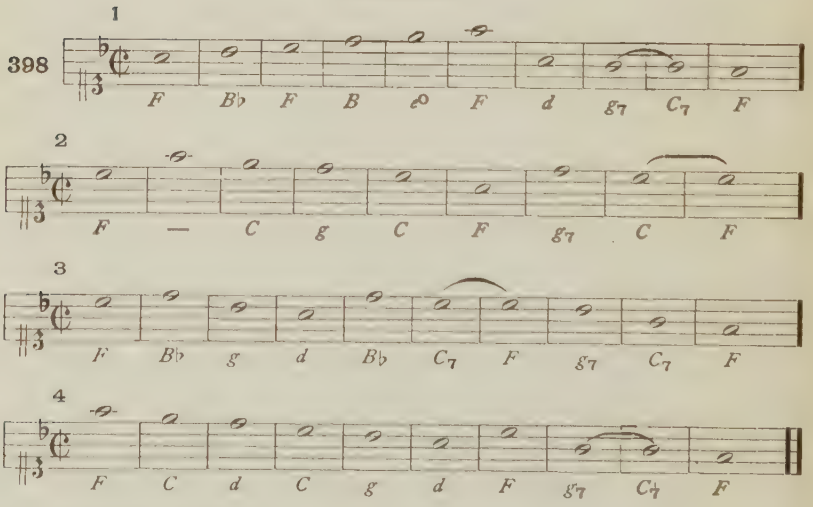


397



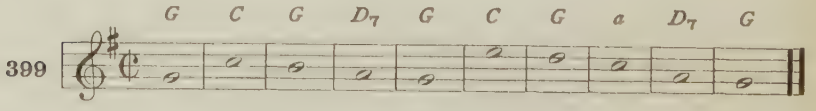
EXERCISES

398



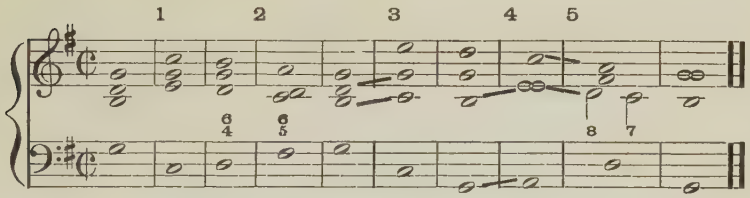
The following exercise

399



shall be worked out in this manner:

400



the mistakes in this solution being marked by figures.

The skip made by all three of the higher parts together in parallel motion, is incorrect, as it violates the first principle of all harmonic interconnection, besides being quite unnecessary. (No. 1.)

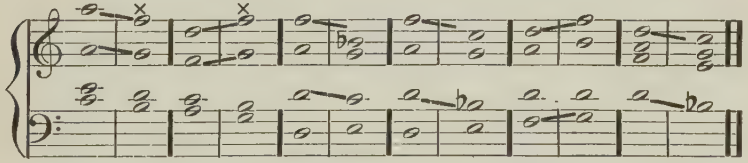
The progression of one or two parts by a skip is allowable only when the harmonic connection is preserved by a third part — either by holding its tone over, or by contrary motion.

No. 2 contains a similar mistake, whose effect is still harsher because Seventh and root enter unprepared in parallel motion and in an awkward position, the one being crowded out by the other.

As previously remarked (pp. 62 and 160), the free entrance of the dominant Seventh can be smoothly effected only where the root is already present in another part, and is held over by the same part.

Hence, the part-leading of none of the examples following is excellent:

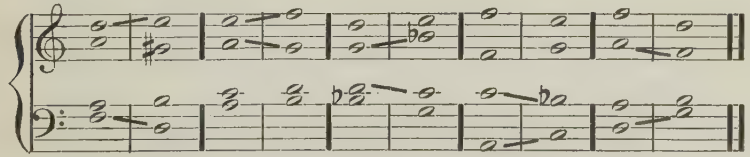
401



A few of these and similar progressions might be excusable where important melodic considerations prevail.

To supplement the remarks on p. 160 concerning the free and unobjectionable introduction of root and Seventh in contrary motion, the following examples are offered:

402

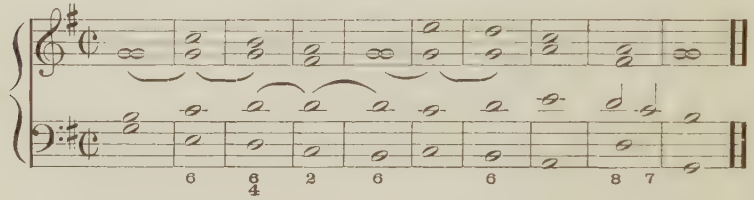


The progression at 2 in No. 400 contains, moreover, a violation of the rule given above for the treatment of the $\frac{6}{4}$ chord, that the bass must not skip out of the $\frac{6}{4}$ chord (p. 151 *et seq.*).

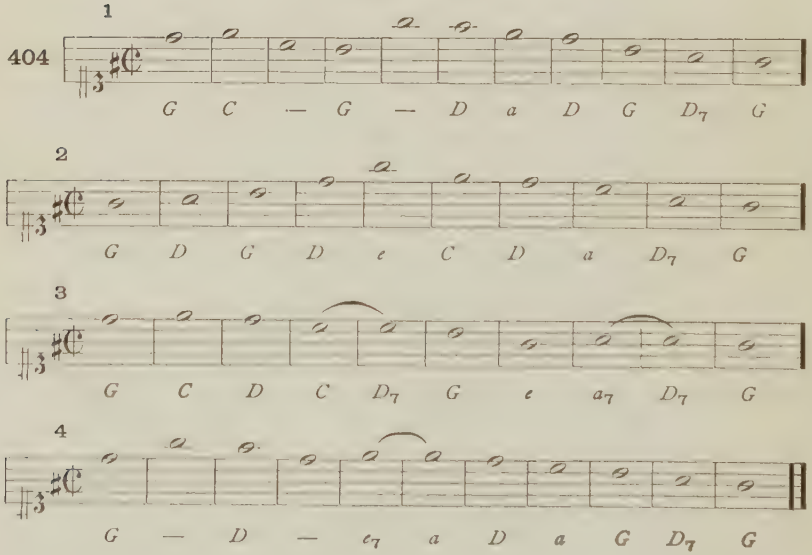
The third mistake in No. 400 is shared by the covered Fifth, which sounds all the worse on account of the parallel skip in soprano, and the scattering progression of the parts in general.

The covered Fifth at No. 4 is to be condemned as needless, since the tenor might just as well have been led from *b* to *c*. The covered Fifth at No. 5 is better, occurring as it does where alto and bass progress in contrary motion.

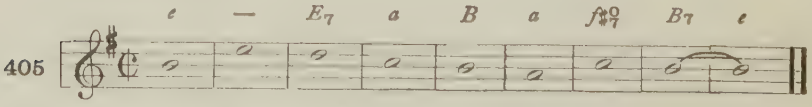
An improved solution of Exercise 399 is given below:

403

EXERCISES

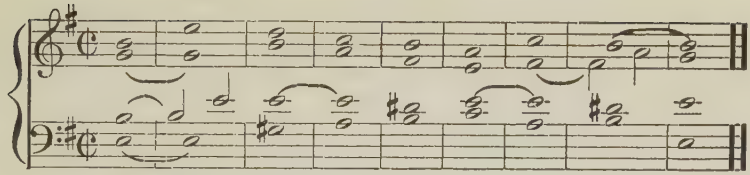
404



Our next exercise,

405

worked out as follows:

406



gives us occasion to discuss a mistake arising from what is termed

the inharmonic relation.

The inharmonic relation (*relatio non harmonica*) — sometimes called the "cross-relation" (Ger. "Querstand") — belongs to the class of unmelodic progressions. It may be defined in general terms by saying that it occurs *when any tone is directly followed, in another part, by the same tone either raised or lowered chromatically;* as *g* in the alto is followed by *g*♯ in the bass in No. **406**.

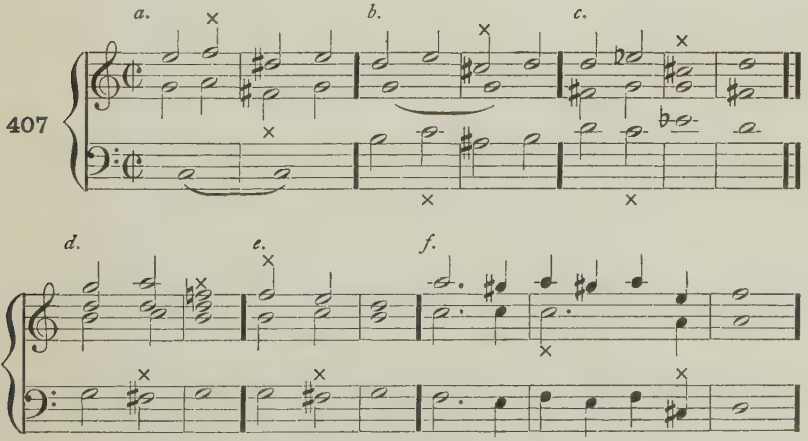
To avoid this mistake, observe the following rule:

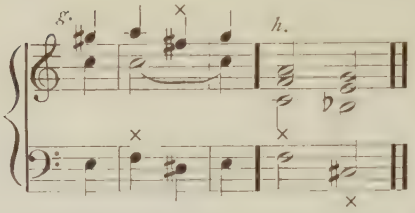
The direct chromatic alteration of a tone is always to be effected only in the same part in which the tone occurred immediately before.

Fully as this rule agrees with all our theoretical precepts for harmonic interconnection and progression, there is hardly another to which more exceptions can be noted in practical work. Hence, recent text-books have viewed the theory of the inharmonic relation with great suspicion, and quoted passages where the relation occurs quite naturally — but without seeking for the reason why they are not to be regarded as incorrect.

Below we give a few such passages.

407



[407 continued]

In every case the inharmonic relation appears, not as the result of a *simply harmonic progression*, but either

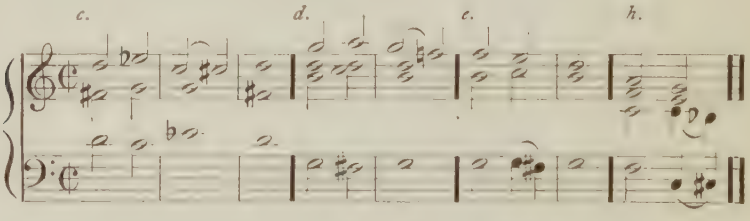
In the guise of changing-notes (as at **a, b, g**), or

As an abbreviation (contraction) *of natural harmonic connections which were, however, too lengthy for the metrical construction* (as at **c, d, e, f, h**).

Examples of the first kind require no proof; we need only add, that this species of cross-relation is most likely to occur on small subdivisions of the measure, and that the given notation in half-notes is unusual, besides being unsuitable for the reason that by this notation the simple *harmonic* foundation is expressed, and not those tonal elements which serve for ornamentation.

The basic progression of the parts, in such of the above examples as resulted from contraction, is as follows:

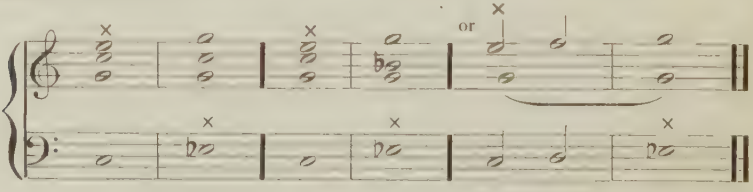
408



Compare these last with the examples at No. **407c, d, e** and **h.**

All these conditions, by virtue of which these forms of the inharmonic relation have become established in practice, are missing in the examples given below and in others like them, whose mode of progression must be considered incorrect:

409



Therefore, entire freedom in the employment of the cross-relation would not be justifiable.

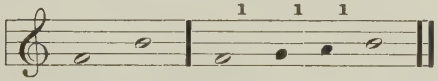
All the above passages, taken from actual compositions, but wrested from their natural context, must be considered with reference to their tempo and to their consistent effect as a whole resulting from the rhythmical divisions, factors which render all these formations necessary and logical, and therefore faultless.

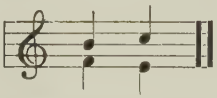
Another progression regarded as a form of the inharmonic relation shall now be explained. It is called

The Tritone.

The tritone is found in the diatonic major scale, embracing the interval from the fourth to the seventh degree; in the *C*-major scale this is the *augmented Fourth f–b.*

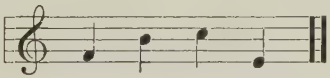
This interval from *f* to *b* embraces *three whole tones* — whence its appellation:

410

It is considered unmelodic and unvocal because each of its tones requires an individual progression for whose consummation two different parts are demanded:

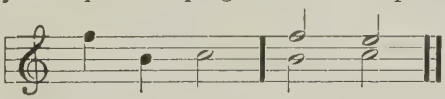
411

and the progression of one of these parts has to be disregarded, when the interval is taken by *one* part (voice):

412

unless the melodic leading were to be shaped thus:

413 

That this, however, is not the sole reason for the ill effect of this melodic interval is proved by the frequent use of its inversion, which would seem equally to require the progression of two parts:

414 

and yet it is just as easy to understand and sing as the tritone is difficult and refractory.

Note. — We will add, that the interval of the tritone, and also its progression, are affiliated with the diminished triad, as is plainly shown in No. 414. (See p. 27.)

In earlier times the melodic progression of a tritone was held to be particularly incorrect because it appeared, among the otherwise simple harmonies in general use, as the only *augmented* interval occurring diatonically. Nowadays, with our extended artistic resources, it is merely set down among the augmented progressions which, in *pure* harmonic part-leading, are to be avoided as unmelodic, or at least employed with caution.

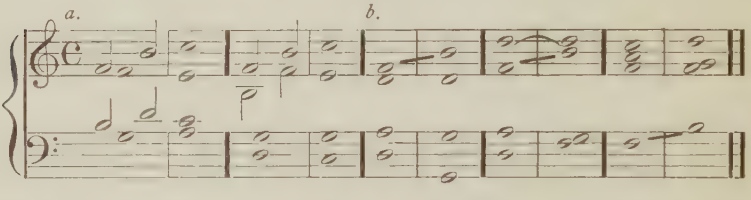
The treatment of the tritone in harmonic progression depends on its position and its mode of entrance.

It can occur either

In progression *within one chord* (**a**), or

In progression *between two chords* (**b**):

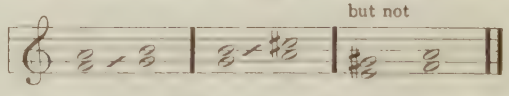
415



When it occurs within one chord, its entrance is not unexpected, and the ear is prepared; in progression between two chords, however, it may easily create a forced impression (compare p. 157).

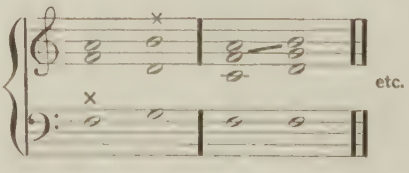
Formerly, the prohibition of the tritone was extended to the two major Thirds which succeed each other at a whole-tone interval:

416



and it cannot be denied that this progression has the same unpleasing effect in two-part harmony; while in three- or four-part harmony, *especially when the Thirds are not taken by the outer parts*, the effect is much smoother:

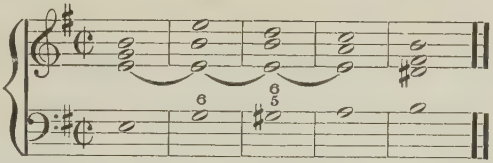
417



The fact that the skip from the fourth to the seventh degree in minor (as from *d* to *g*♯) was formerly not counted as a tritone, is founded on the earlier customary mode of writing the minor scale and its chords. The effect is the same in minor as in major, the interval being an augmented one.

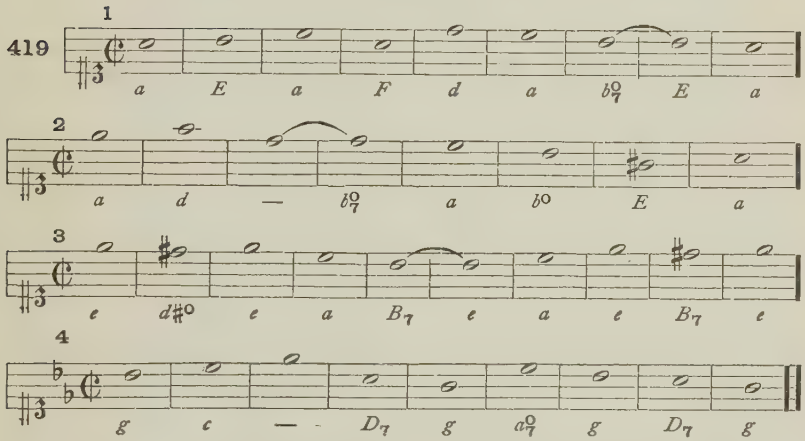
Returning to Exercise 405, let us try to improve the working-out, and avoid the tritone.

418



EXERCISES

419

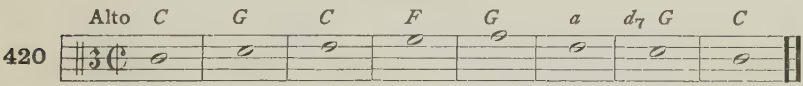


2. Harmonic Accompaniment to a Given Inner Part

Practice in this branch, which properly belongs to contrapuntal work, cannot begin too early. In these introductory exercises the fundamental tones are marked by letters.

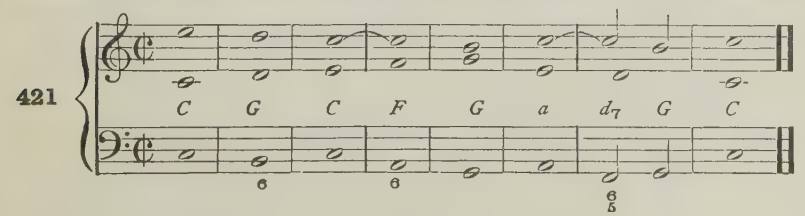
EXERCISE

420



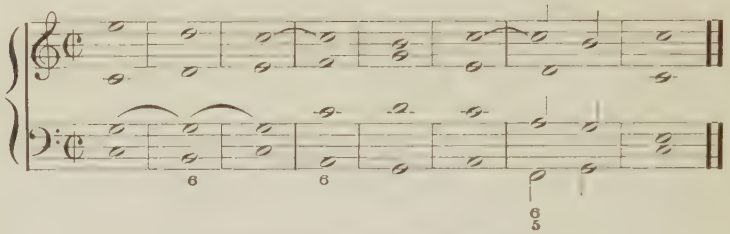
In working out this exercise, the first and most important matter is to get the bass part settled and written down. At the same time the soprano, as the most prominent part, may also be added. For example:

421



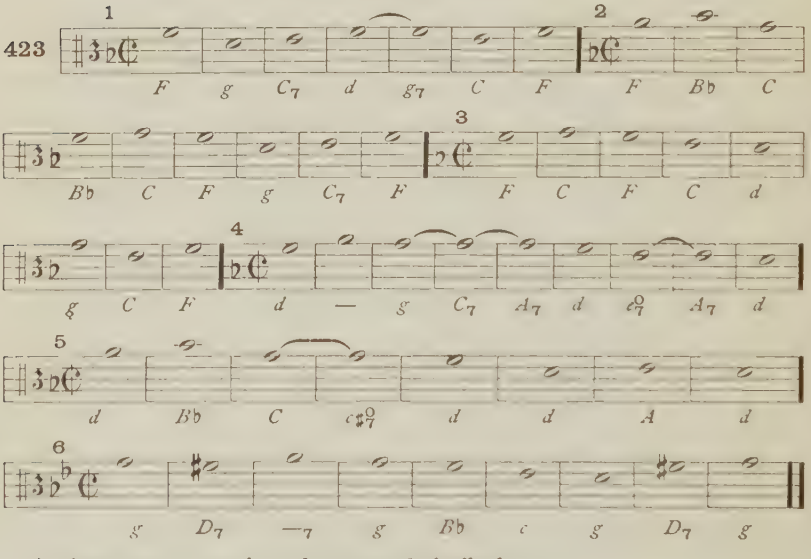
The above will do for three-part harmony. With the tenor part added it will appear thus:

422



EXERCISES WITH GIVEN ALTO

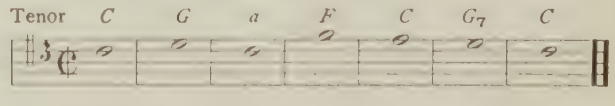
423



A given tenor part is to be treated similarly.

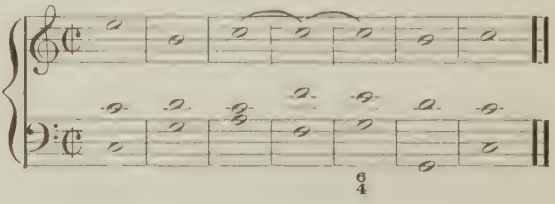
EXERCISE

424



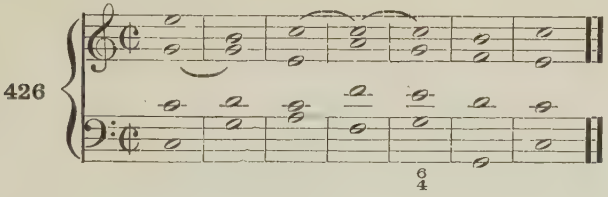
With bass and soprano written in:

425

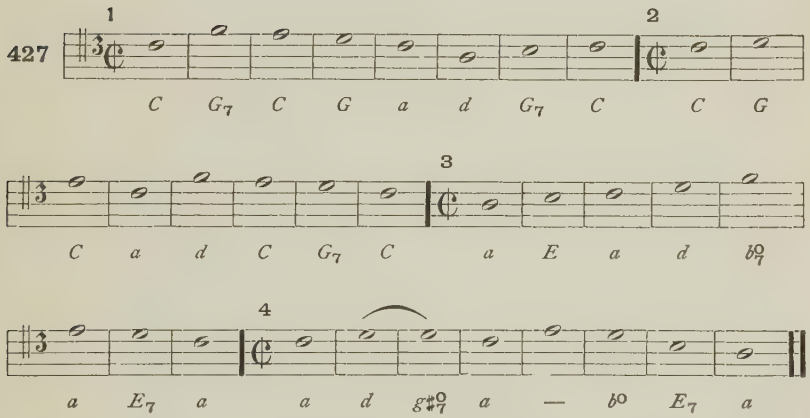


In four-part harmony:

426



EXERCISES WITH GIVEN TENOR

427

These exercises are to be continued until both the writing out of the bass part, and the part-leading in general, can be conducted readily and accurately.

In closing this Chapter we shall add the observation, that in order to work out these four-part exercises satisfactorily an advantageous position of the parts is a prime necessity. The limits of the parts themselves (viewed as voice-parts) must not be overstepped, and neighboring parts must not be too far apart; neither should they be kept too close together (this does not apply, of course, to two parts which meet on the same note), but be allowed a certain freedom of progression.

With reference to the above, bear in mind this rule:

Of the three highest parts, no two neighboring parts should have a wider interval between them than an octave. The relation of the bass to the tenor, however, permits of exceptions.

NOTE. — It would not be to the purpose to set the present exercises in the bass, since they would then merely assume the shape of figured basses, like those in our earlier exercises. They can be used only for *free* harmonic treatment.

CHAPTER XVIII

Amplification of the Harmonic Accompaniment

Write, to a given part in whole notes, an harmonic accompaniment in half-notes alternating between the other parts.

This can be effected

By means of *two chords;*

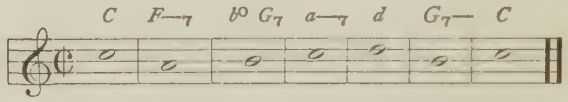
By *changing the position of a chord;*

By *suspensions.*

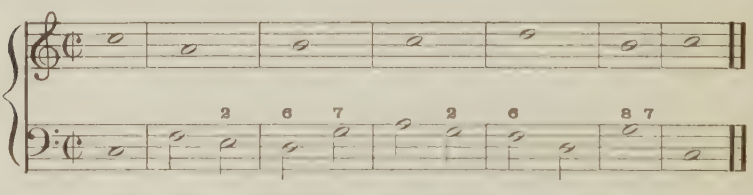
The exercises will be marked as heretofore.

EXERCISE

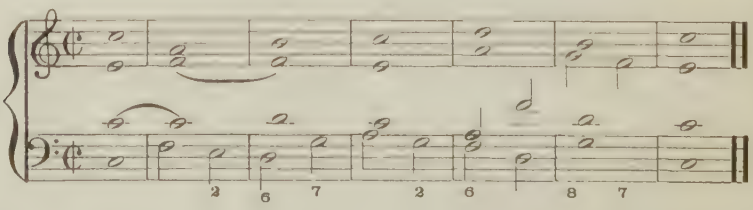
428

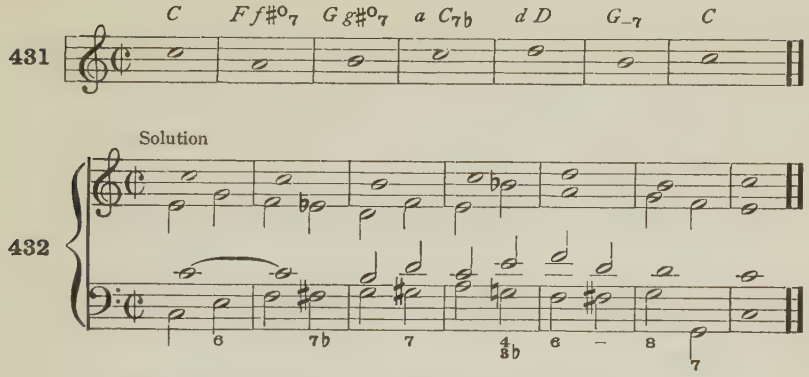


We may fill in the bass as follows:

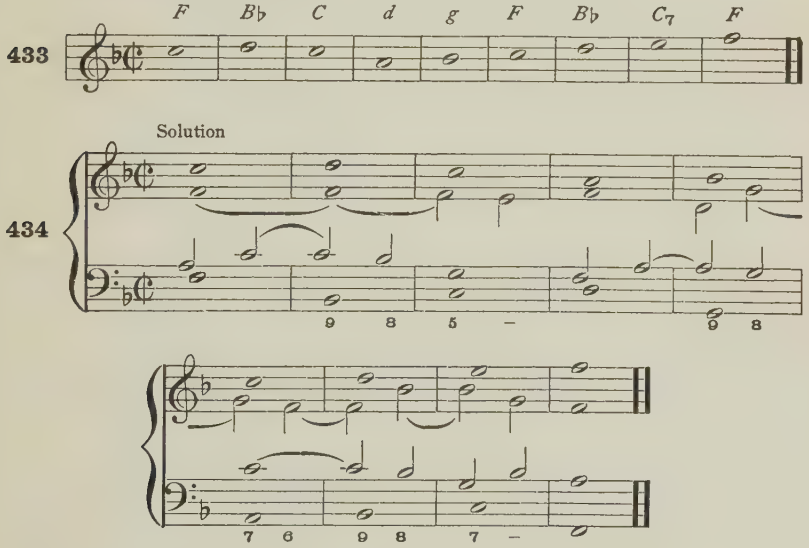
429

In the second and fourth measures we find Sevenths of secondary seventh-chords unprepared. To these the name of "passing-sevenths" is applied. They proceed out of the root of the chord, and always occur on the *arsis.* Under these conditions they may appear in any part.

By adding the two inner parts to the bass as filled in above, we obtain the following four-part sketch:

430

With richer variety in the harmony, together with modulations, the exercise may be presented thus:



In the next exercise the use of suspensions is shown.



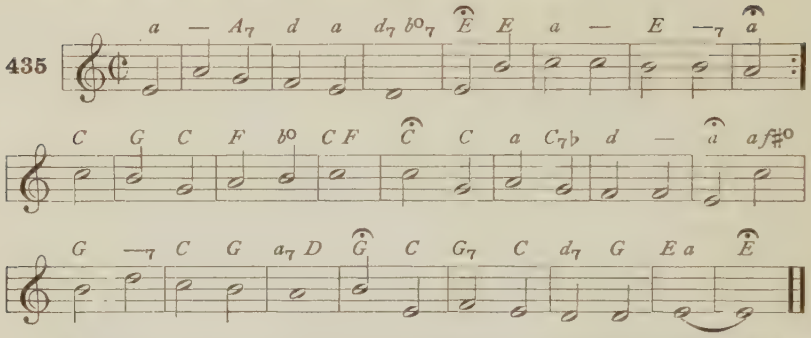
We omit exercises with given inner parts.

The given part (*cantus firmus*) has till now been written out as a simple melodic progression in whole notes in order to exhibit the simple harmonic content of the measure, or (as is done in *alla breve* time) to mark its main divisions (in half-notes). When the *cantus firmus* is given in half-notes, we can employ chorale-melodies for our exercises.

For his private practice the student will find it easy to indicate the root-tones in the usual way over the melodies, by analyzing the chords in any well harmonized selection of chorales, and may then try to add bass and inner parts.

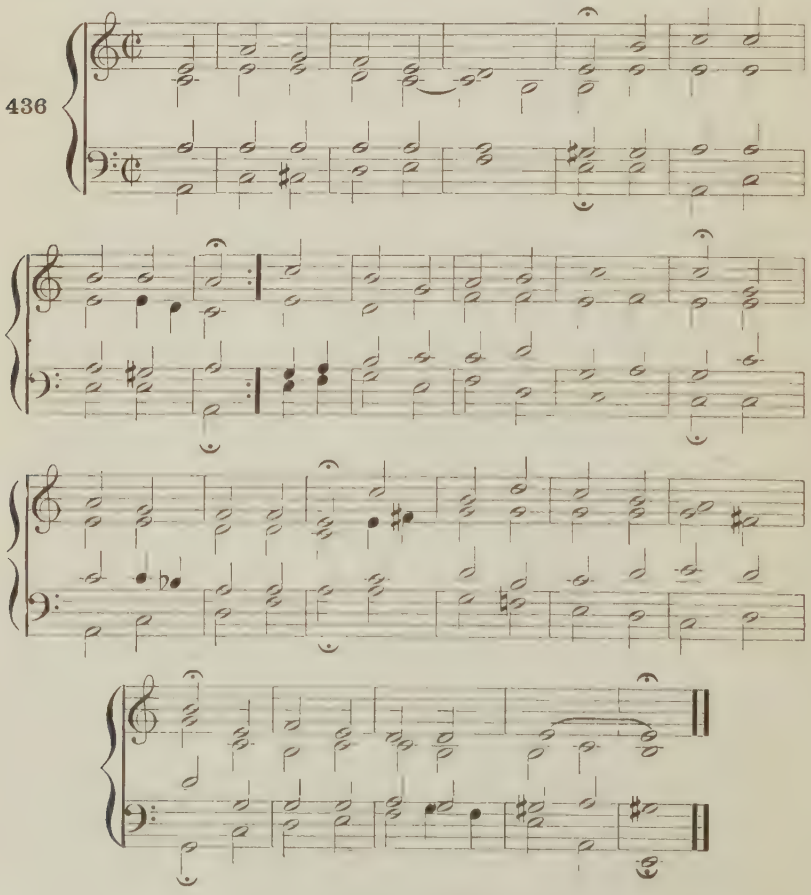
Our next exercises shall exemplify this procedure:

435



The working-out of this chorale according to the given lettering is as follows:

436



NOTE. — Strangely enough, instead of a full close, there is a half-close at the end; this is, however, necessitated by the peculiarities of the melody, which is written in an old ecclesiastical mode (the Phrygian) requiring peculiar treatment. Further on, under "Cadences," more will be said about this close, which is generally known as the "Phrygian Close."

After skill has been attained by sufficient practice in the simple harmonic treatment, the student may proceed to further development of the part-leading with the aid of passing- and changing-notes.

To promote this end, the next Chapter shall be devoted to a further discussion of Melody and Melodic Progressions.

CHAPTER XIX

On Developing the Melody

Under this head we shall not take up the invention of melodies, but the development of melodic form, and — as a matter of the highest importance for our harmony-exercises — by elaborating and amplifying melodies, become familiar with and learn how to use their essentially harmonic elements.

Success will depend on our recognition and comprehension of the principles stated below:

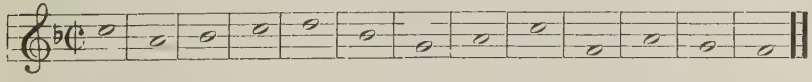
(1) *Every melody, whatever may be its length or complexity of development, has an equally simple foundation as those used for exercises in our latest examples.*

(2) *Hence, however complicated the harmonic progression of the parts, it may be reduced to a progression of simple chord-forms.*

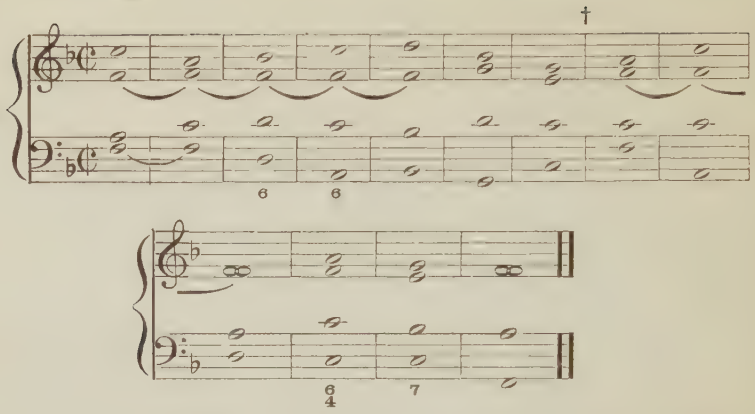
To obtain real insight in this matter, we must learn to distinguish between essential notes, and notes which are merely auxiliary or accessory.

To this end we choose the analytical method, taking for development the following melody, written out, to begin with, in the simplest manner and with the root-notes indicated, as before:

437 *F — B♭ F B♭ g C F — d F C_7 F*



Our selection is simple, both in melody and harmony; we shall proceed to fill in the harmony as follows:

438

Before taking up the further elaboration of this example, we must consider the elements entering into the rhythmical development of a melody.

A melody may be either a musical passage filling a few or many measures and without definite limits (such as occurs frequently as the theme or motive of a composition), or an entity complete in itself and set off by contrasting divisions.

A melody of this latter kind is called a Period, and embraces, as a rule, eight measures divided into two contrasting four-measure phrases. These contrasted sections are called the Fore-phrase and the After-phrase.

Further details belong to the Theory of Musical Form.

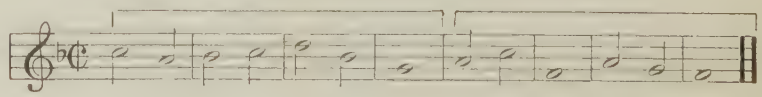
From its ending it is apparent that our last example is intended for a period; and it becomes necessary, first of all, to discover the dividing-line between the phrases.

This dividing-line is very often marked by a cadence, which appears in the middle of the passage in the form of an incomplete full cadence, or a half-cadence, or a plagal cadence.

Such a *half-cadence* (generally a close in the dominant) is found in the sixth and seventh measures of our example; where the dagger is set is the point which may be assumed as the dividing-line between the phrases.

Accordingly, the first phrase (the Fore-phrase) would consist of *seven* measures, and the second phrase of *six* measures, each of which is to be rhythmically transformed into a group of four measures. This we shall effect in the following manner:

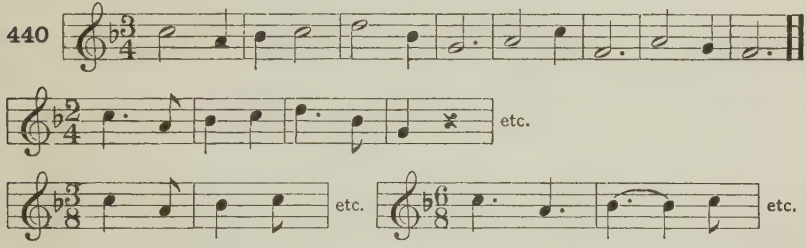
439



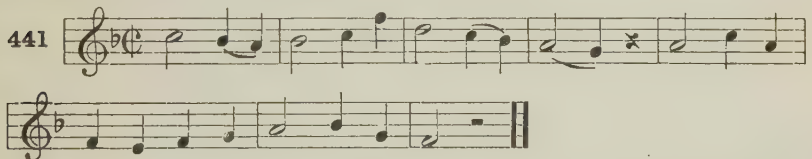
By adding the harmonic accompaniment already chosen, we obtain a complete musical period.

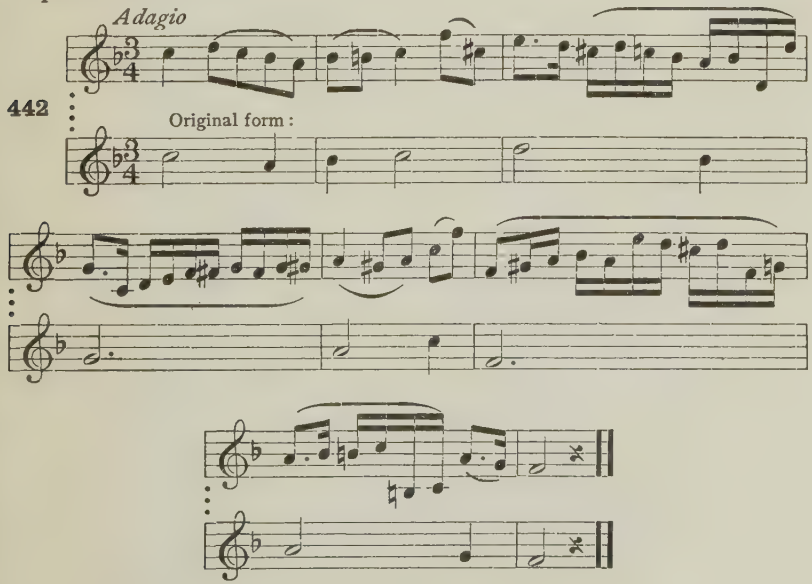
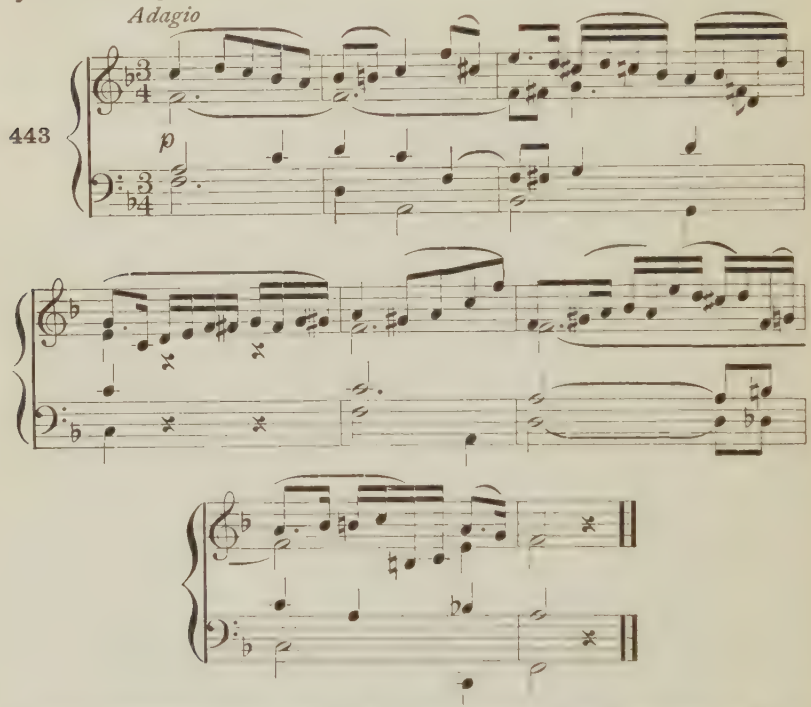
We can also perceive at a glance that all further transformations in the various species of time, changing, for instance, into two-four or three-four time, three-eight or six-eight time, may be accomplished very easily. For illustration:

440



We shall now pass on to the tonal variations of the melody, and introduce passing- and changing-notes; *e.g.*,

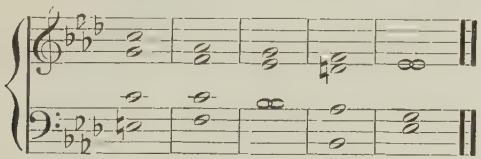
441

By a still freer employment of all by-tones we arrive at the following amplification:

442

The simple melodic progression written out underneath may readily be recognized as the foundation. And we shall immediately perceive that the upper melody was elaborated on the basis of the original harmony, when we fill in the remaining parts with the few deviations conditioned by the new soprano:

With reference to the parallel octaves between the inner parts in the third measure of this example it may be observed, that they are to be regarded as entirely correct when they do not occur singly, but appear in a considerable series simply as a reinforcement for intensifying an harmonic and melodic progression. In such a case the passage is considered to be in three-part harmony.

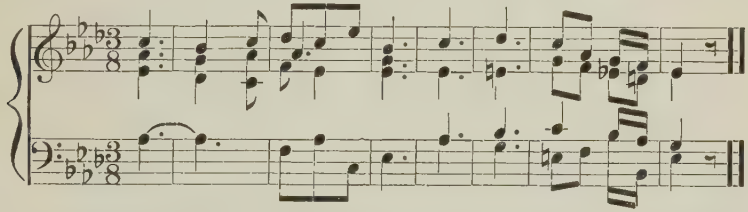
However slight the independent value of this example may be, it will answer our purpose of showing to what extent the simplest harmonic and melodic passage may be developed.

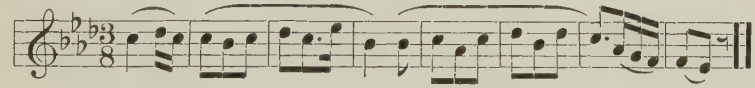
To the student, the utility of examining and penetrating into these harmonic and melodic relations is of such high importance, that we shall not fail to present another example in the following interesting passage.

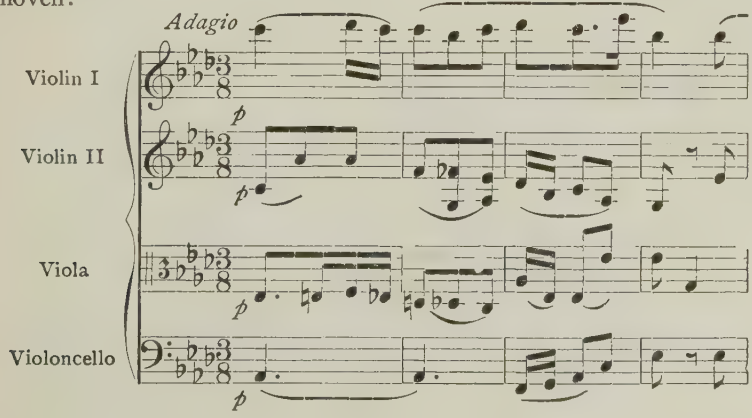
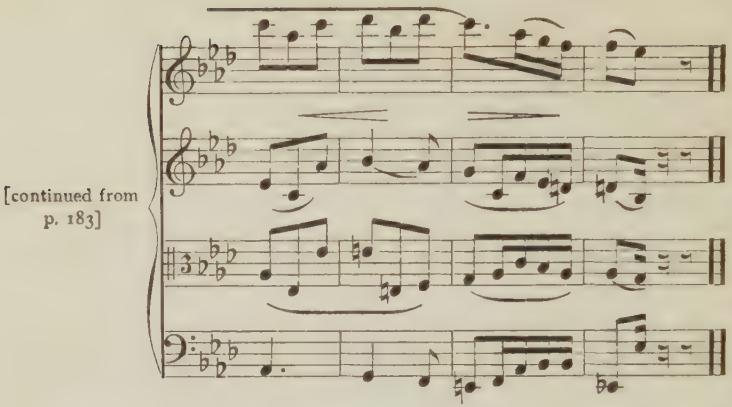
The fundamental harmonic progression is precisely as simple as that of the former example.

444

The above is meant to form a period; the middle cadence between the phrases is readily found in the half-cadence in meas. 7.

Omitting the various species of time, we select the phrase-division given below:

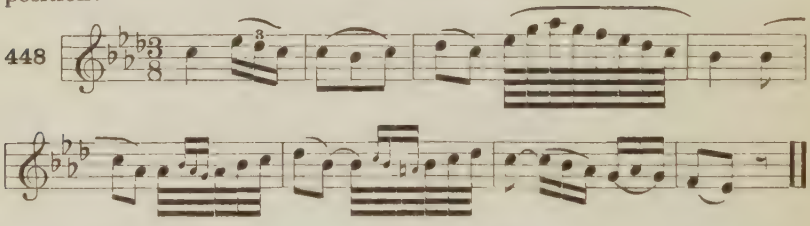
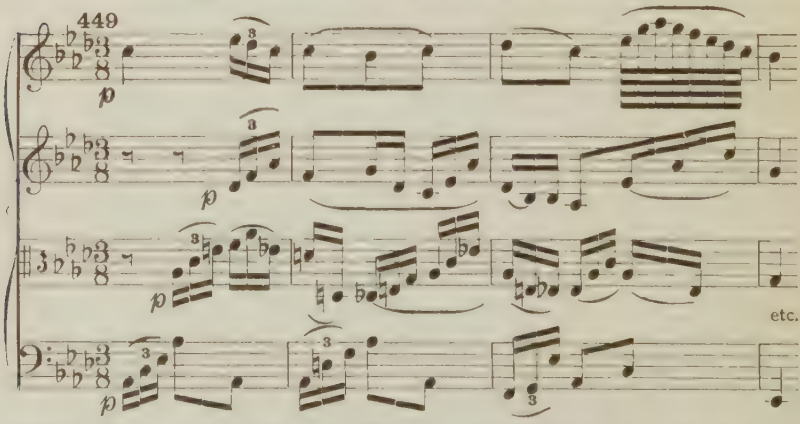
445

The development of the highest part with reference to the harmonic progression will be effected in this way:

446

To what an extent the other parts may participate in the melodic development is shown in the following excerpt from the *E♭* Quartet by Beethoven:

447

[continued from p. 183]

Comparison with No. 445 will make the harmonic and melodic variations manifest.

Below we give a variation of the original melody from the same composition:

448

The remaining parts exhibit the following variations:

These hints on melodic amplification may suffice for the present. Further study in this direction is left to the student's own initiative, or to a special course.

NOTE. — Do not be misled by the mechanical character of the entire procedure; for however certain it is that this mode of manipulation is not regularly followed in actual composition — even though Beethoven, in the subsequent variations of the above original melody, must of necessity have followed it to some extent — it is equally evident that our immediate object could only be, on the one hand, to set the relation of our previous exercises to practical work in the proper light, and, on the other hand, to obtain clear insight into complicated compositions *structurally considered.*

As to the accompanying parts, they arose naturally out of the simple harmonization and required fewer transformations; therein showing themselves to be not unimportant, even though subordinate.

We have still to discuss other modes of accompaniment, to which the next chapter shall be devoted.

CHAPTER XX

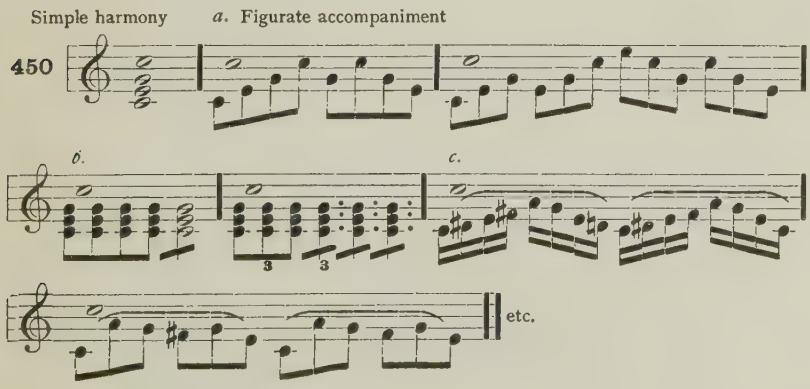
Amplification of the Accompanying Parts

The manner in which the accompanying parts participate in the harmonic, melodic and metrical development, is already shown by the last examples in the preceding chapter.

There are, however, still other kinds of accompaniment, known as

Figurate Accompaniment.

It is unsuitable to the character of vocal parts, and can be employed for such only within very narrow limits. The following investigation will deal solely with instrumental music.

By "figurate accompaniment" we understand a style of accompaniment resulting from the uniform metrical transformation of the simple chord-tones. For illustration:

The accompaniment at **a** is an *harmonic* figuration. The figures arising from it are also called "broken chords." That at **b** is *metrical* figuration; that at **c**, *melodic* figuration. The figures arising from this last are formed out of changing- and passing-notes.

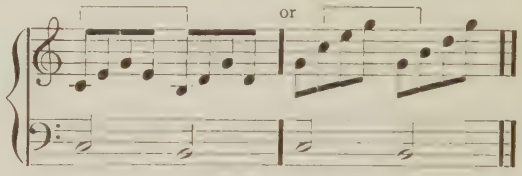
Any accompanying part may be utilized for such figuration, either alone or in combination with other parts.

We choose the beginning of Example **437** for experiment with a few styles of accompaniment; prefacing the work with the following remarks.

When the figures are repeated uniformly (*e.g.*, in broken chords), *all rules governing the leading of the parts* **at a change of chord**, *and also the rules for doubling notes, must be observed.*

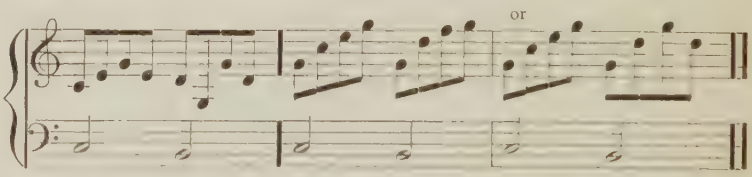
Consequently, we must not write

451

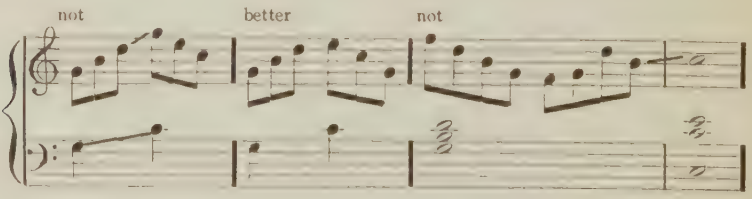
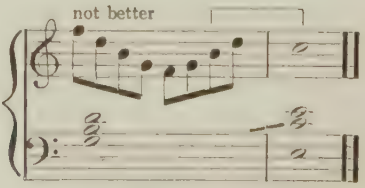
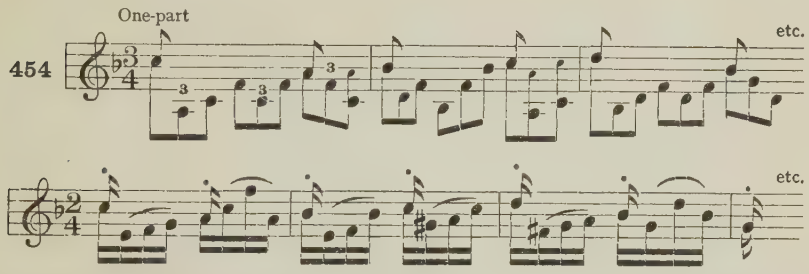


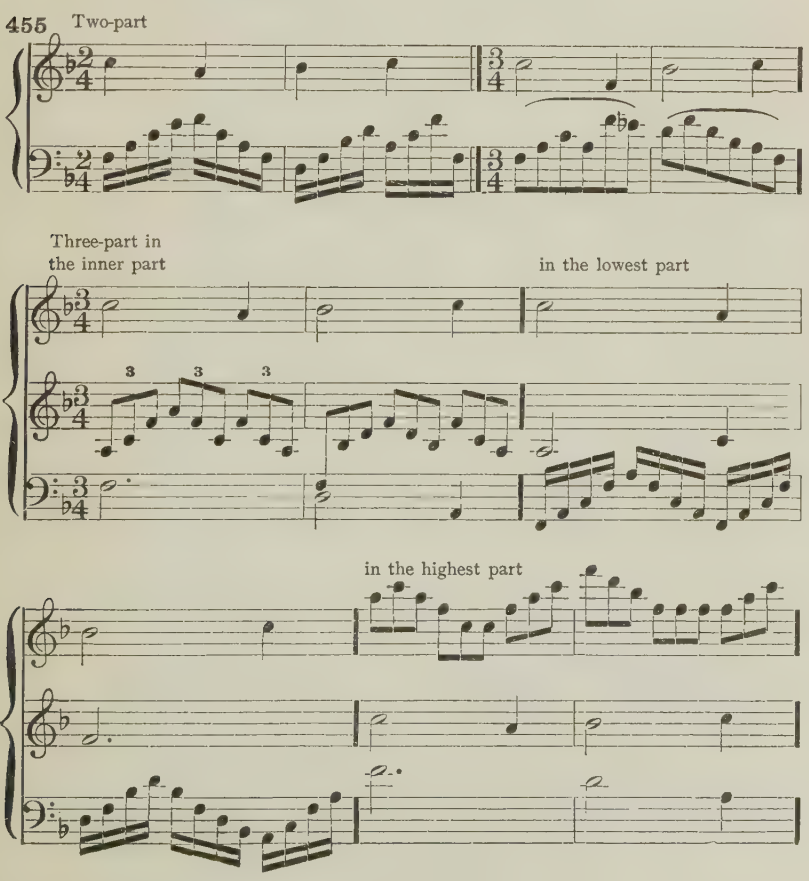
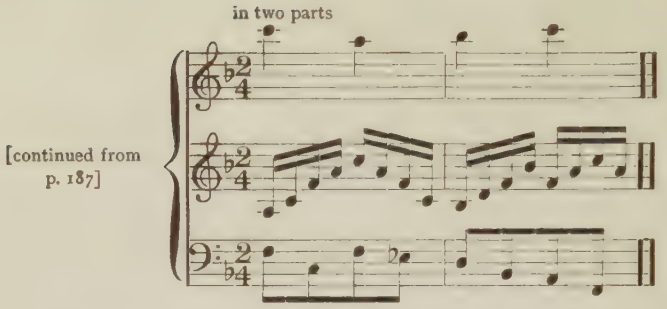
but rather like this:

452

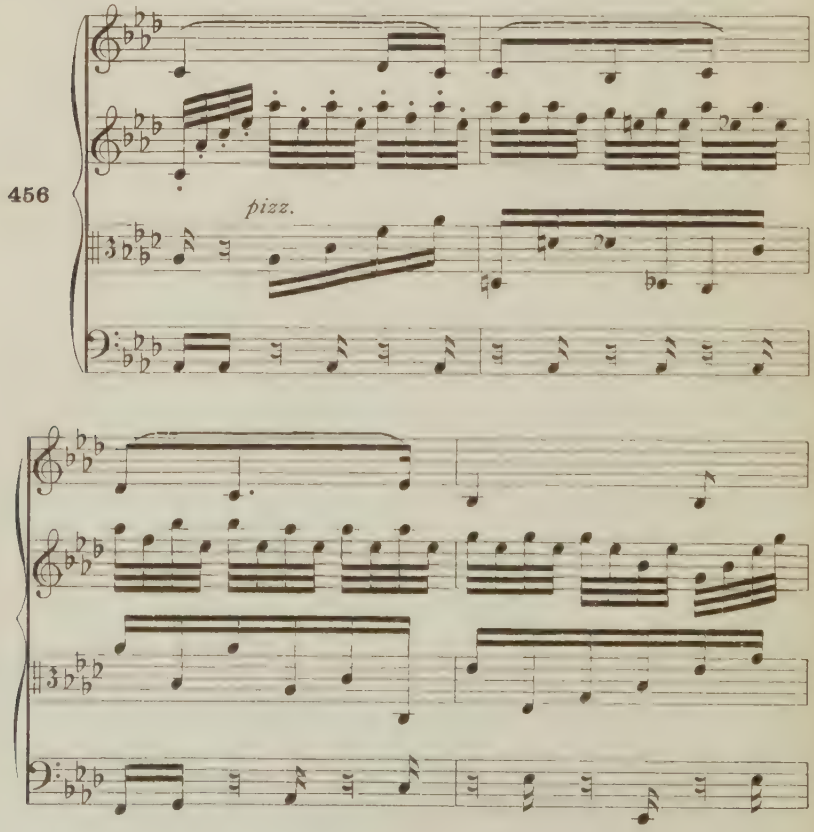
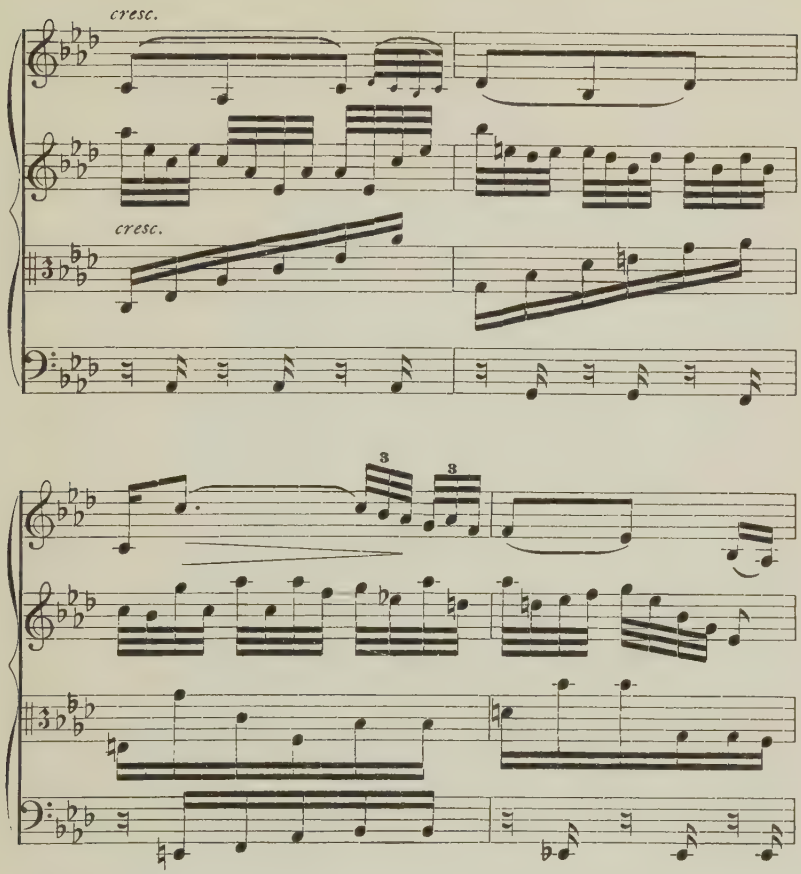


At a change in the harmony, the *last note* in one figure and the *first note* in the next figure must not form an incorrect progression with any other part. For illustration:

453

Harmonic figuration affords a means of developing even *one-part passages* much more fully. A few examples with the melody of No. 437 are given below:

It is easy to see that these passages are calculated for an instrument, such as a violin or clarinet.



Figurations in four-part harmony can be just as readily written out, taking the above examples as models.

Instead of doing so we prefer to quote, as an example of manifold figuration, the following passage from the above-cited quartet-movement by Beethoven.



This wealth of amplification rests wholly on the foundation presented in Nos. **445, 446,** and **447**; and in every instance where a change of harmony takes place, the part-leading is carefully considered.

For obtaining clear insight into compositions developed in this way, and a comprehension of their inner harmonic construction, it will be an excellent plan to reduce such pieces to their simple foundation. Industry in this discipline will be rewarded by a broadening of knowledge in many directions, and by dexterity in the employment of the most varied resources of art in original composition.

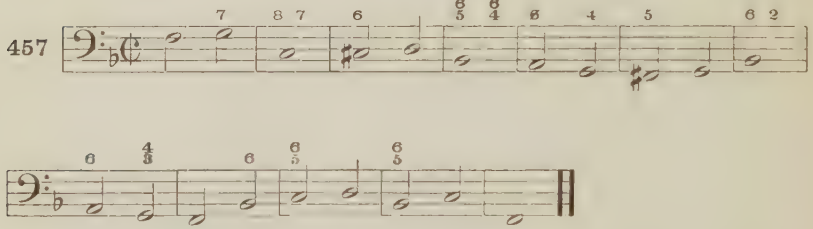
CHAPTER XXI

Exercises in Three-Part Harmony

Hitherto we have generally employed four-part harmony in our exercises; still, although it appears most suitable for harmonic interconnection, and yields more complete results than three-part harmony, practice in writing this latter will be found very useful, as it is peculiarly adapted to develop skill and resourcefulness in part-leading.

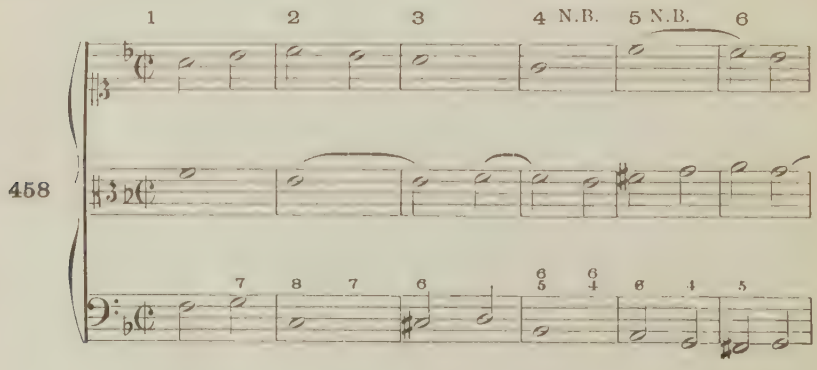
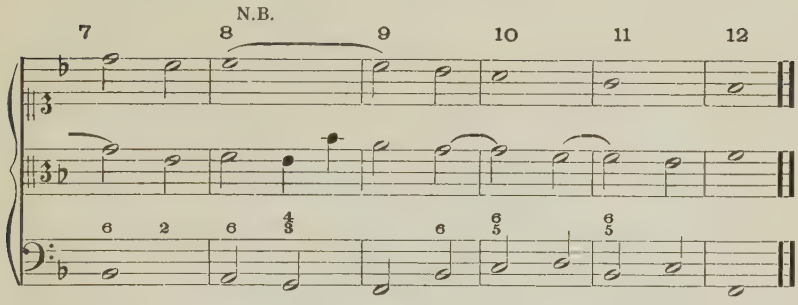
As before, exercises with figured bass form the starting-point.

457

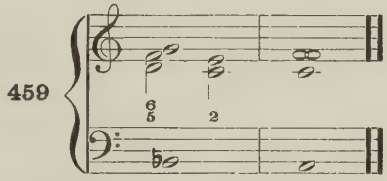


While harmony in three parts can yield the full triad, it not seldom happens that one of its intervals is omitted; and in seventh-chords one interval must, of course, be dropped, though this can never be the Seventh itself. As a rule, the Fifth may be left out (as has already been done in four-part harmony), and, in many cases, the root also; the Third, being the characteristic interval of the triad, can be omitted very infrequently without a peculiarly empty effect.

To the following solution of the exercise a few comments shall be appended.

458



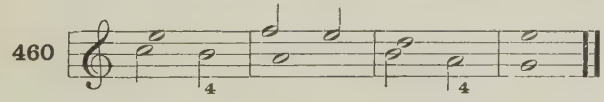
In the fourth measure, at N.B., we find the $\frac{6}{4}$ chord of the diminished triad *e–g–b♭*. It takes the place of the chord of the Second *b♭–c–e–g*, whose root, *c*, is omitted here; for in four-part harmony this passage would read thus:



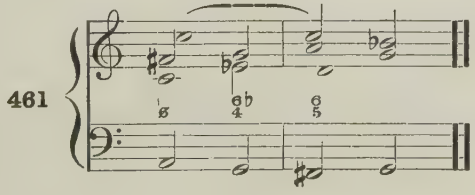
(Compare the observations on this chord on p. 153.)

In meas. 5 the chord is represented by a Fourth. Now, although a Fourth cannot pass for a full chord either in three-part or two-part harmony, as the Third and Sixth may do, nevertheless, in cases where the $\frac{6}{4}$ chord might be used in four-part harmony as a *passing-chord* on the arsis, the Sixth or the Third of the fundamental chord may be omitted when this improves the part-leading; and then the Fourth is left alone to indicate the root and Fifth of the original chord.

In two-part harmony the Fourth is sometimes substituted for the chord of the Second, especially in connection with a passing Seventh:

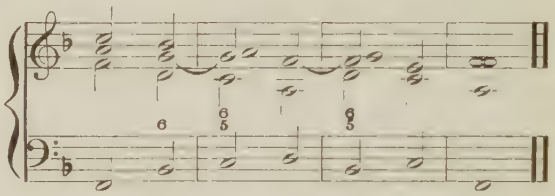


Written out in four parts, the above passage in No. 458 would appear, complete, as follows:



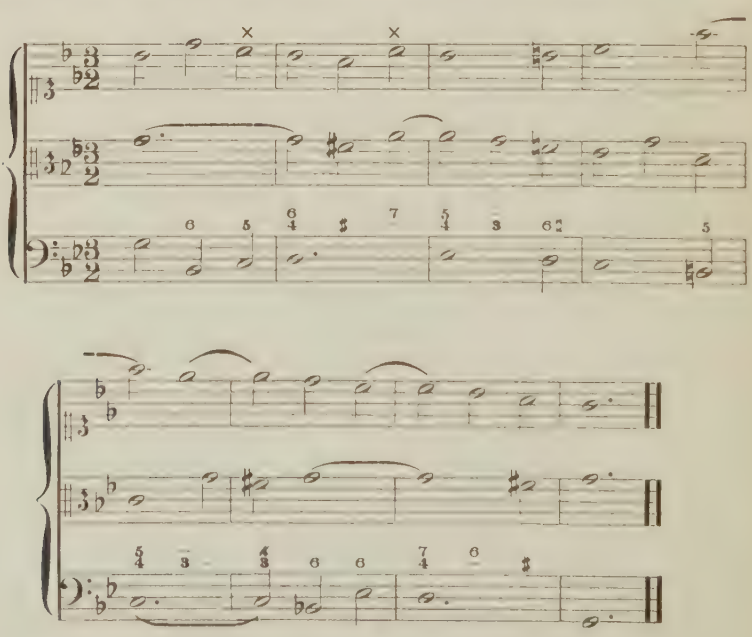
In No. 458, meas. 8, the $\frac{6}{4}$ chord is completed by the leap in alto.

In meas. 10 we apparently have a $\frac{6}{5}$ chord. Here the Fifth is nothing more, at bottom, than a suspension before the Fourth, which latter, however, is transformed into a Third by the bass progression. All this is more intelligible in four-part harmony:

462

The final measure in No. 458 shows, in the octave *F–f*, that in such cases the triad may appear even without Third and Fifth.

The first and second measures of the next example show how the omission of the Third is often necessitated by the part-leading.

463

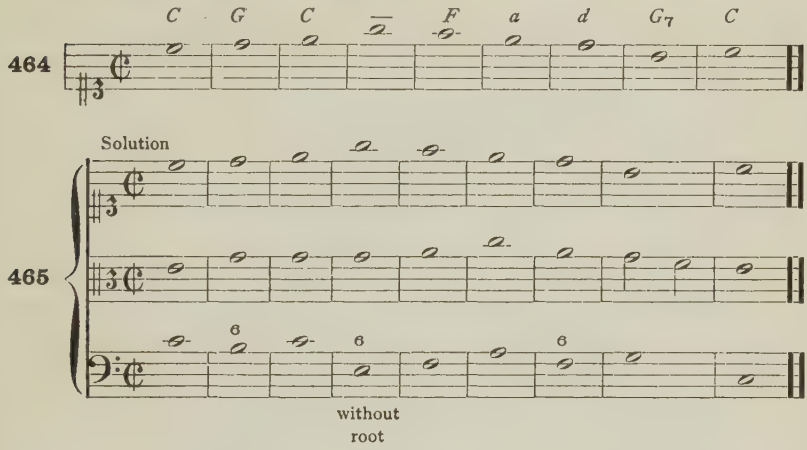


The Third may best be omitted on the arsis (marked ×); ***it must not be omitted on the thesis***, the beginning of the measure.

Further exercises are left to the teacher's discretion.

EXERCISES IN THREE-PART HARMONY WITH GIVEN SOPRANO

The following exercise with root-tone lettering is to be worked out.

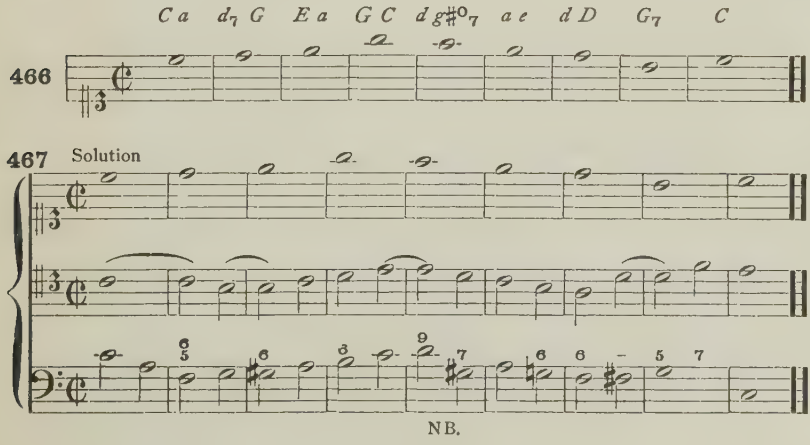


This working-out requires no explanation.

Which parts shall be chosen for the inner and lowest parts will depend on the general position of the chords. When the position is low, the tenor part is more suitable than the alto; similarly, the tenor may be substituted for the bass as the lowest part.

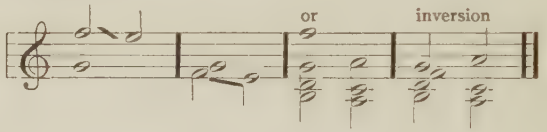
In the following example the tenor is chosen as inner part, because its progression tends to follow that of the bass; whereas the simple melody of the soprano seems to occupy a naturally isolated position.

We now present the last exercise with amplified harmonic development:



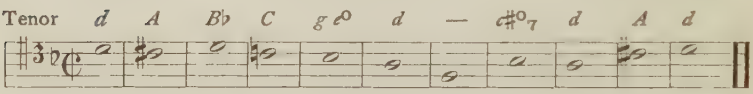
In meas. 5, at N.B., what is properly a suspended Ninth is made by the position of the parts to appear as a Second; this may occur very seldom, and only between tenor and bass. Besides, there is no such thing as a suspended Second, since the Second is nothing more than an inverted Seventh, and is controlled by the progression of the latter interval. For illustration:

468



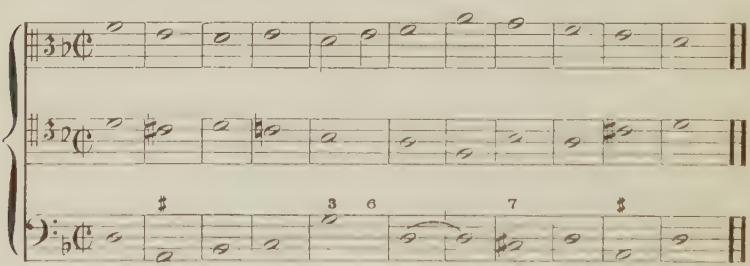
THE GIVEN MELODY IN AN INNER PART

469



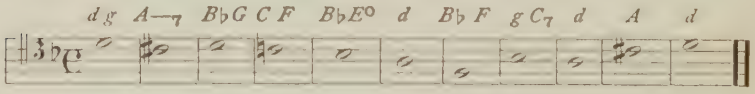
Here the alto is best adapted for the highest part.

470

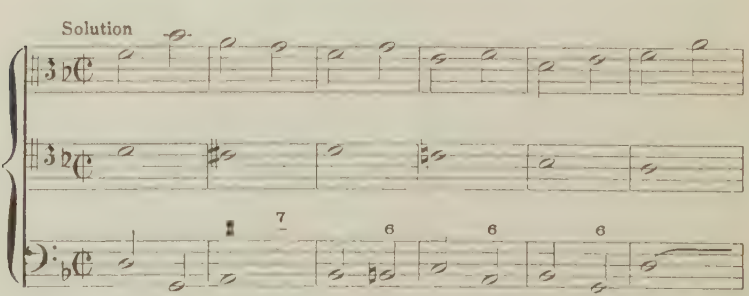


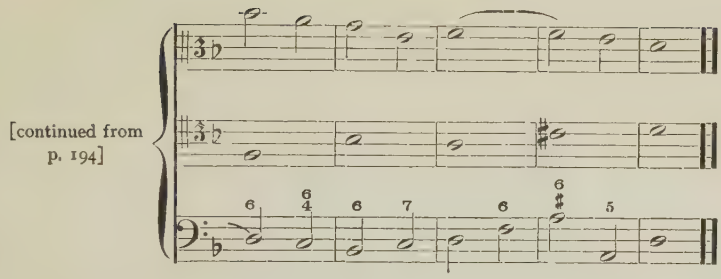
The same exercise with the chord-progressions differently marked:

471



472





The last measure but one furnishes a proof that even the Sixth may figure as a suspension.

Exercises previously given for four-part harmony may be used for further practice.

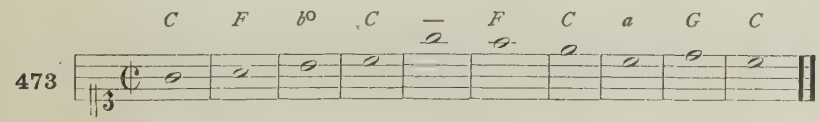
CHAPTER XXII

Two-Part Harmony

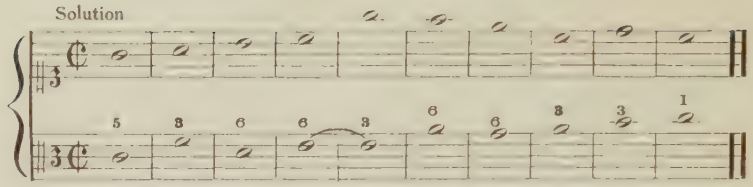
The decided "thinness" of two-part writing, considered from a purely harmonic viewpoint, makes it appear but seldom appropriate for other than contrapuntal work; only in this field does it attain to real importance, and is then employed even in polyphonic movements, like the fugue. While metrical and rhythmical variety in the development of the parts can render two-part writing bearable in simple harmonic construction, it is only the contrapuntal development of two parts which can liberate it from the monotony of frequent passages in Thirds and Sixths, and endow it with the essential completeness which is required in every other polyphonic movement.

One interval, or more, will always have to be omitted in two-part harmony. In triads, either Fifth or root will usually be the omitted interval. When seventh-chords are used, the Sevenths, of course, must not be left out. Octaves and Fifths can seldom be introduced, their effect being too empty; the Fourth can be brought in only rarely, either where the $\frac{6}{4}$ chord would regularly occur, or when it is substituted for a chord of the Second (see p. 198).

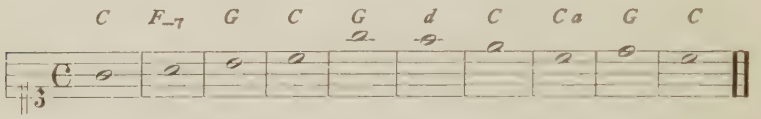
EXAMPLE

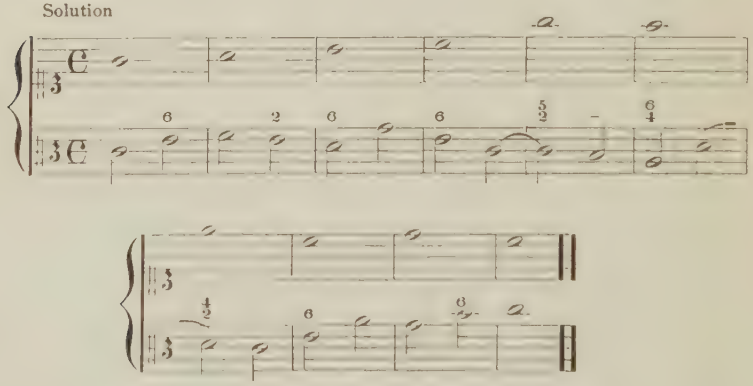


Solution

474

By comparison with the root-tones in Exercise 473 one may readily perceive where the roots are omitted. Such omission will seldom render the harmony indistinct, each chord being self-explanatory through its position between the preceding and following chords.

The same, with the chord-progressions differently marked:

475

Solution

476

Most of the exercises given in Part III trespass upon the domain of counterpoint. They are distinguished from the latter by having the succession of the chords marked in advance, so that only the part-leading remains to be settled; while in contrapuntal exercises both a knowledge of harmony, and assured skill in its use, are assumed, so that the succession of chords can be left to individual selection.

These exercises may, therefore, be regarded as useful preliminary practice for contrapuntal work; at the same time they give the student a notion of the relation of harmony to counterpoint.

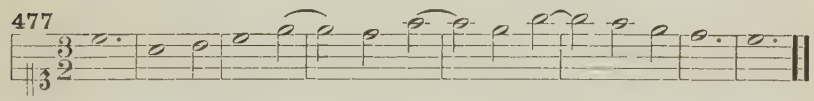
The exercises in the next chapter, where even the aforesaid limitation by a prescribed chord-succession is done away with, are to be regarded in the same light.

CHAPTER XXIII

Harmonic Elaboration of a Given Part in Melodic Development

Here we do not mean, by "melodic development," the rich ornamentation of a part exhibited in Chapter XIX; we only propose, by means of a metrical variation of the beats, to avoid the uniform chorale-like movement of the earlier exercises, thereby affording an opportunity to learn how the parts in the harmonic accompaniment may be better developed.

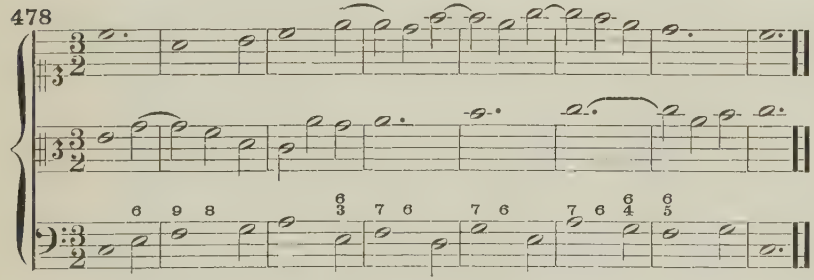
The following exercise will make this plainer.

477

The chord-succession is left to be settled by the working-out itself.

Even if the form of measure selected would, in itself, bring about a similar melodic leading of the parts to be supplied, their progression must nevertheless be carefully conducted according to the principles explained in the foregoing chapters, if we would secure their free and flowing development.

We present this exercise at first in three-part harmony.

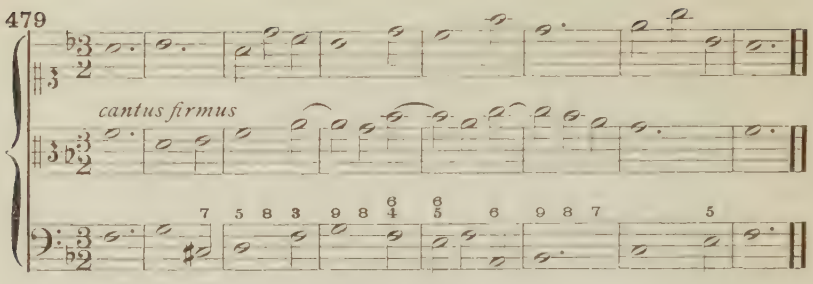
478



In view of what has already been said concerning three-part writing, this working-out needs no further explanation.

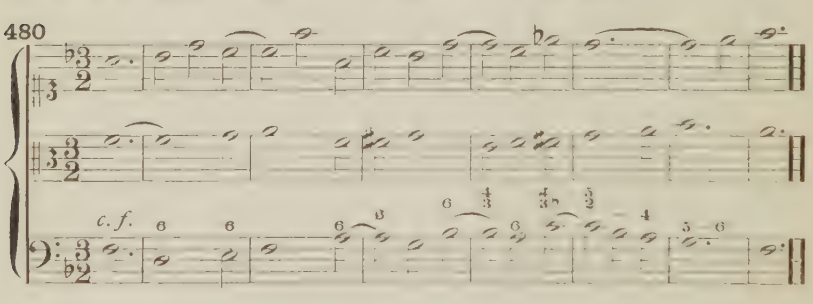
Filling in the harmony to this melody, given as an inner part, will exhibit its versatility, and may be recommended as excellent practice.

In order that the alto part may be retained, we transpose the melody into *F* major to improve the position.

479

The unprepared entrance of the $\frac{6}{4}$ chord in meas. 4 is explained by the observations on passing-chords in Chapter XV. Here it is brought in accidentally by the stepwise progression of the bass, and takes the place of the chord of the Second.

The same *cantus firmus* is now transferred to the bass:

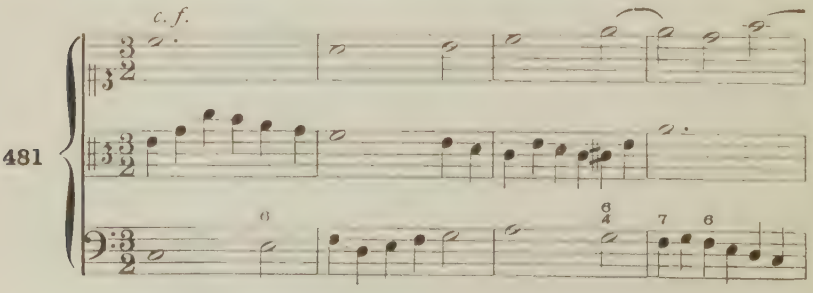
480

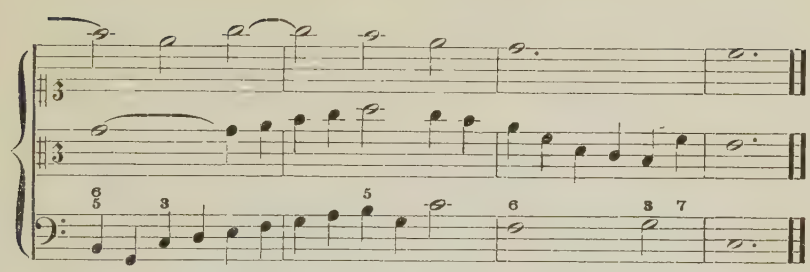


In meas. 3 and 4 of this working-out there is a weak spot in the harmonizing of the *a* held over in the bass. The bare Fourth in measure 6 is likewise a very incomplete representative of a chord, unless it be explained as a passing-note.

For the further development of the part-leading, passing- and changing-notes may be introduced in the two added parts alternately; *e.g.*,

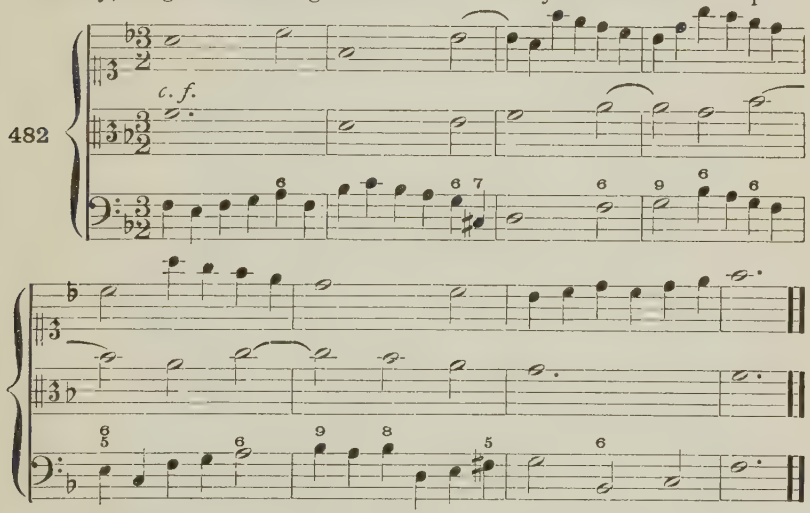
481





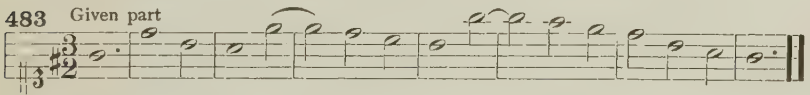
Finally, we give a working-out with the *cantus firmus* in the inner part:

482

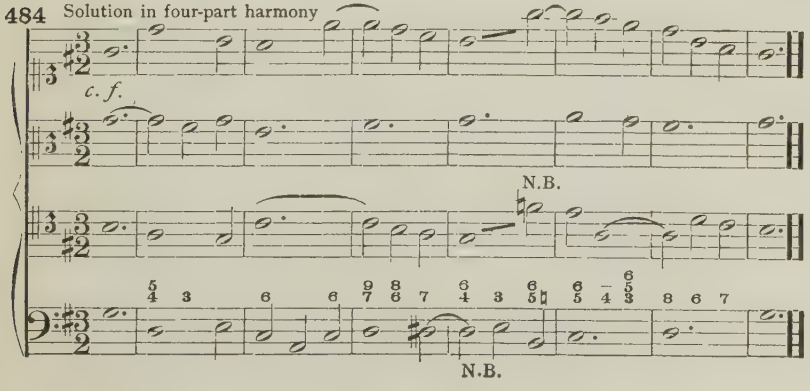


As examples in four-part harmony we add the following:

483 Given part



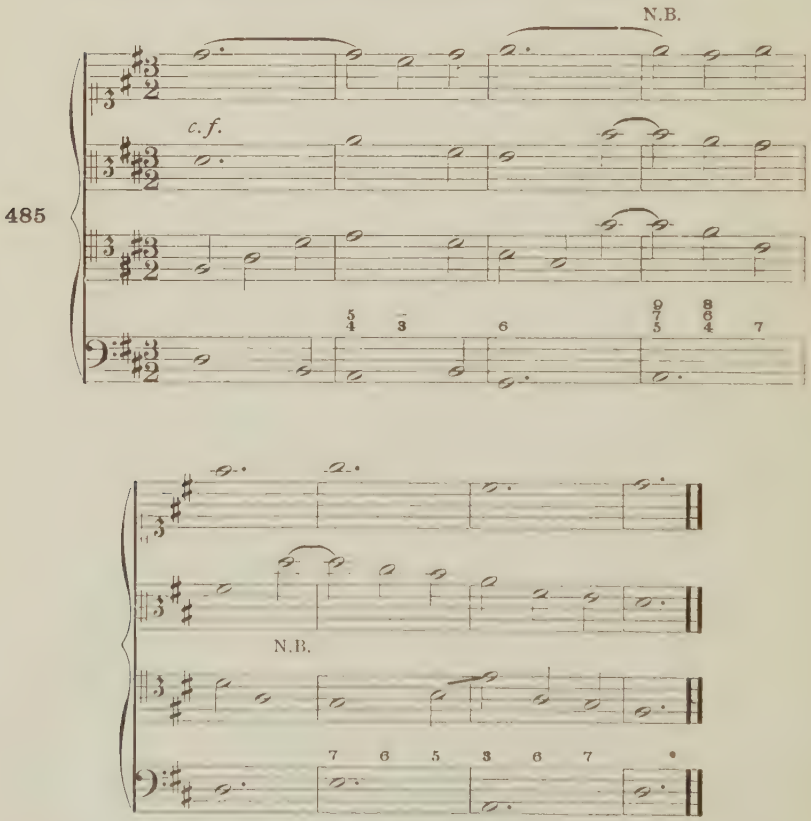
484 Solution in four-part harmony



At N.B. in the fifth measure the leap of the tenor to the Seventh is censurable because the soprano, at the same time, takes a long leap in the same direction to the root, *g;* only the position of the alto affords any excuse in this case.

In the same measure we find the $\frac{6}{4}$ chord of the augmented triad, whose original Fifth is prepared. (See p. 83.) It occurs here in the character of a suspension from below upward. (See "Suspensions," Chapter XII, p. 112.)

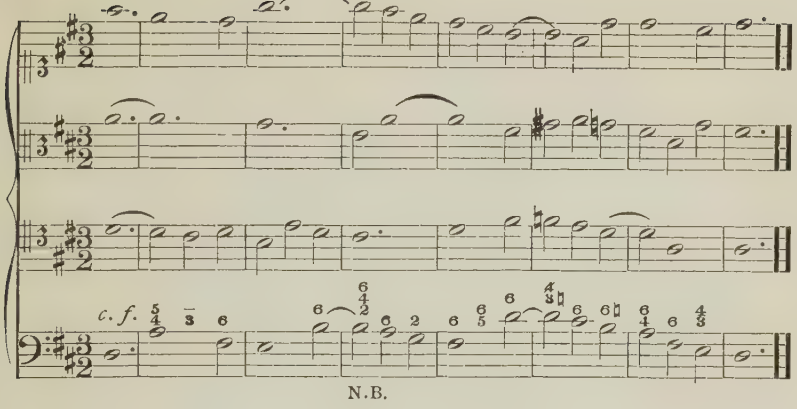
The same *cantus firmus* in alto, transposed to *D* major:



In meas. 4, suspensions occur in three parts (see p. 113). In meas. 5 and 6 the position of alto and tenor is not good, the interval between them being much wider than an octave.

Of the other possible solutions, we give below that with the *cantus firmus* in the bass.

486

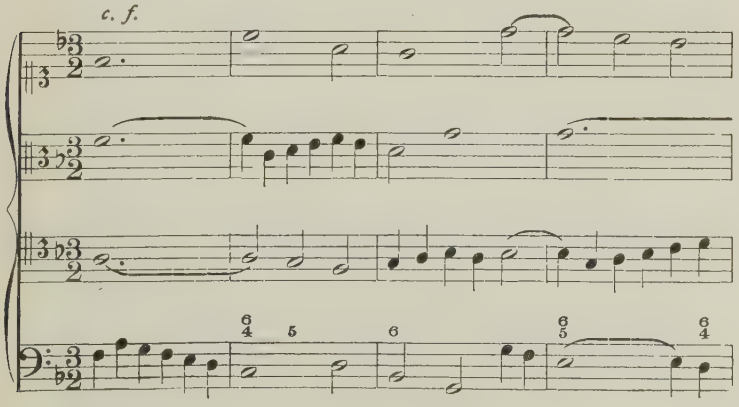


In meas. 4 the introduction of the seventh-chord on the seventh degree is indistinct in effect, because the root lies immediately above the Seventh (see p. 59). In similar favorable situations the chord of the Second of vii$^{9}_{7}$ might well be employed.

For the rest, the progression of this chord does not follow the tendency of the leading-tone, but is effected in the cadencing style proper to the other seventh-chords: $c\sharp^{9}_{7}$–$f\sharp$. — (See pp. 58 and 59.)

The working-out of this *cantus firmus* with a livelier part-leading may be presented as below:

487



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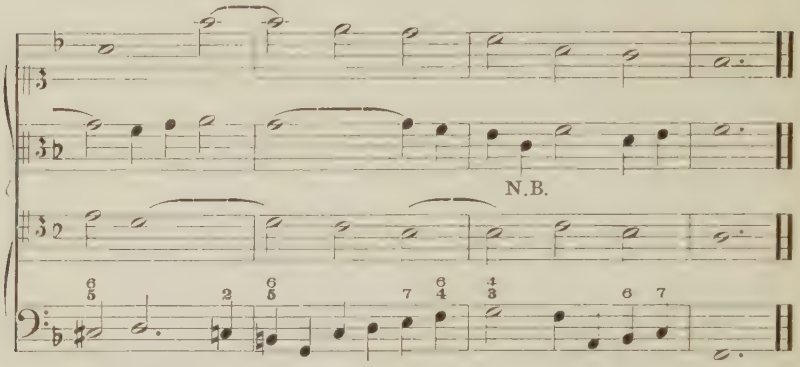
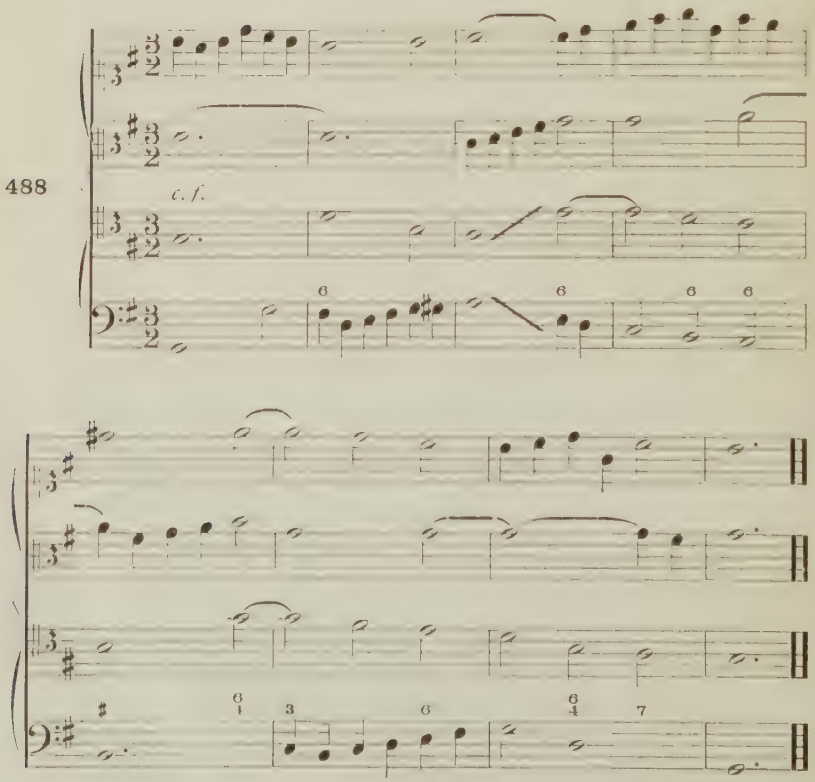


The upward progression of the Seventh in the last measure but one (at N.B.) is necessitated by the leading of the soprano.

And, lastly, we add a working-out with the *cantus firmus* in the tenor:

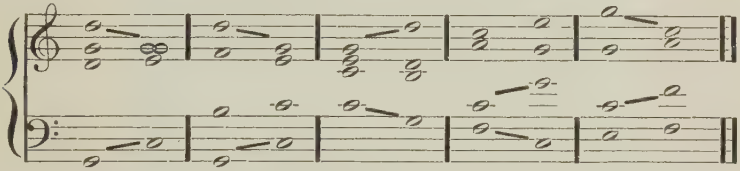


The third measure affords occasion to speak of successive octaves and Fifths *occurring in contrary motion.*

According to the principle explained on pp. 15–18, they are just as incorrect as those in parallel motion; and in the case of successive octaves it is especially noticeable that they hamper the free movement of the parts. With successive Fifths, however, the characteristic disconnection of the chords is greatly modified by contrary motion, particularly when the Fifths approach each other; when they progress away from each other, the lack of connection makes itself more strongly felt. (Compare No. **485,** meas. 6–7, Fifths between tenor and bass.)

Also compare the following examples:

489



A glance at the examples worked out in this chapter will convince us of the melodic development of the parts; and this is the reason for allowing them to pass for countrapuntal work; for the very essence of counterpoint, in contradistinction to merely rhythmico-harmonic writing, consists in the freer melodic leading of the parts in contrasted (rhythmical) movement, while observing the laws of harmony, which form, as it were, the innermost core.

At every point in these examples, even where the parts progress in quarter-notes, the simple harmonic structure can be demonstrated; so for the present they may serve to teach us the difference between the purely harmonic and the contrapuntal styles of treating a given part. Detailed explanations on this head can be given only when counterpoint is taken up.

CHAPTER XXIV

Five-Part Harmony

Having already been obliged to double the intervals of the triad in four-part harmony, we shall find it necessary, when writing in five or more parts, to extend this doubling still further, even in the case of seventh-chords.

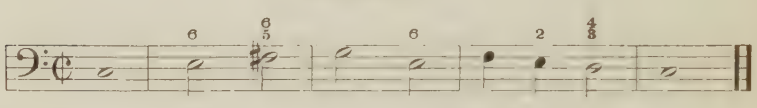
As each part in pure harmonic writing must maintain its independence, in order to gain this end those intervals which *permit of a dual progression* must be especially adapted for doubling. True, under certain

conditions any interval of a chord may be doubled; but the Sevenths are least adapted for this purpose, and can be doubled only when some melodic progression (like that of a passing-tone or chord) makes it necessary.

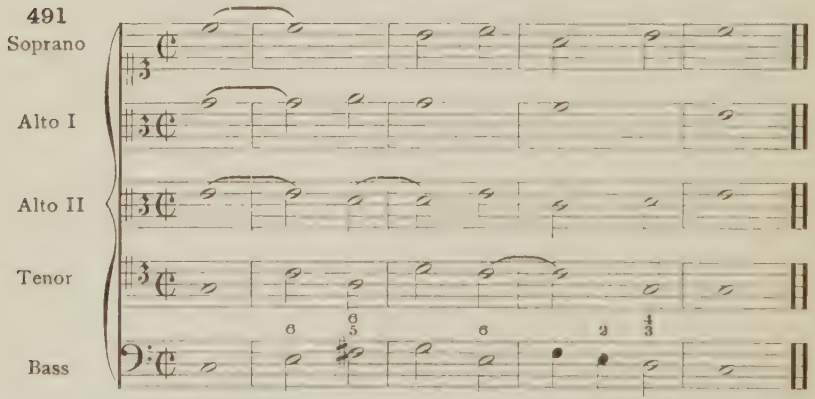
Further comments will be appended to the illustrative examples.

EXERCISE

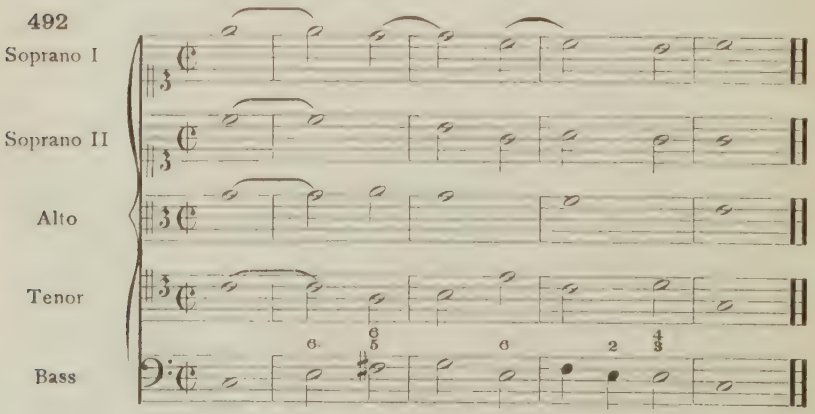
490



According to the position of the parts either two sopranos, two altos, or two tenors may be chosen for the working-out.

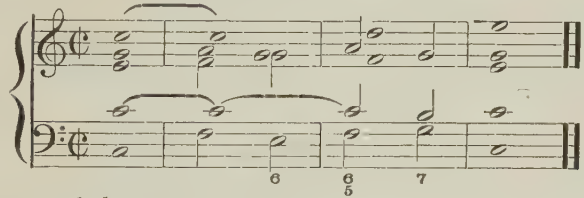
491

The same example with a different solution:

492

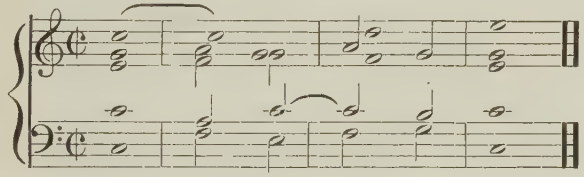


To preserve independence in the part-leading, no two parts should remain together on one tone, or the same octave, *when the chord changes.* Such is the case in the above example between Soprano II and Tenor in meas. 1 and 2; but here it is not incorrect, because the chord *merely changes its position* without going over to another chord.

The following passage, however,

493

should be improved thus:

494



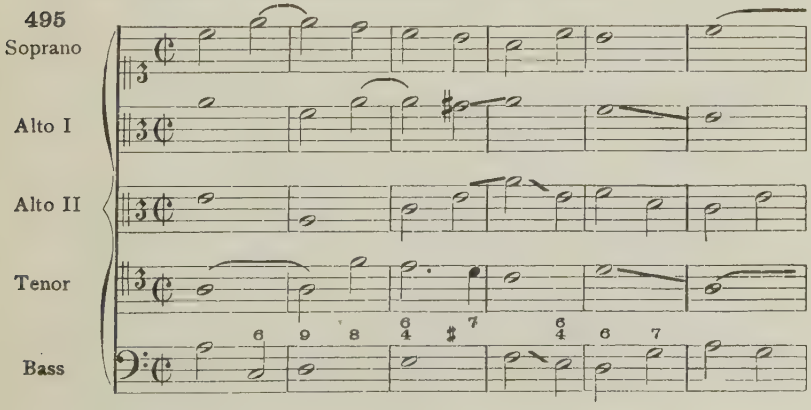
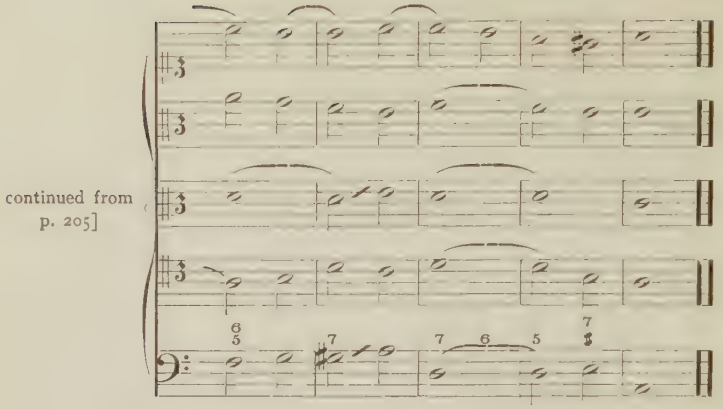
NOTE. — When the number of parts is increased, exceptions to this rule often occur, for the reason that other conditions then prevail.

By examining the leading of Soprano II and Tenor in No. **492,** meas. 3, we shall see that the part-leading may also allow the doubling of the leading-tone.

Even more frequently than in four-part harmony, covered Fifths, octaves and unisons are unavoidable when *still more parts* are involved. Remember, however, that the *outer parts* must still progress according to rule, only the inner parts being allowed greater freedom.

The next example contains several such progressions:

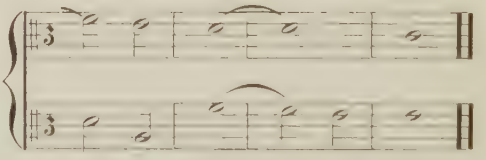
495



Here covered Fifths, octaves and unisons are marked by slanting lines. The open Fifths between alto and bass in meas. 8 could not be avoided, as the diminished seventh-chord can often not be resolved otherwise with *five or more parts*.

To be sure, the first and second alto might be led in meas. 8–11 like this:

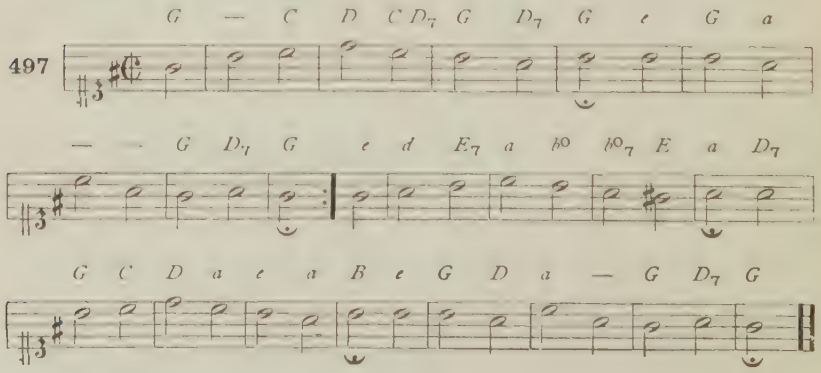
496



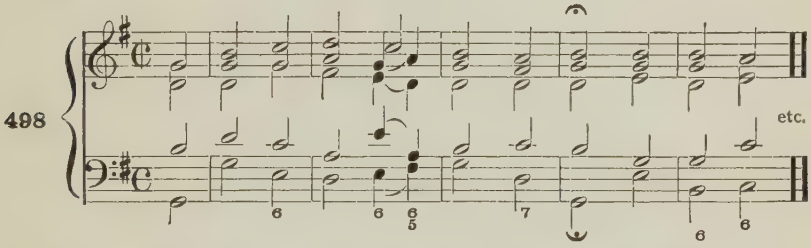
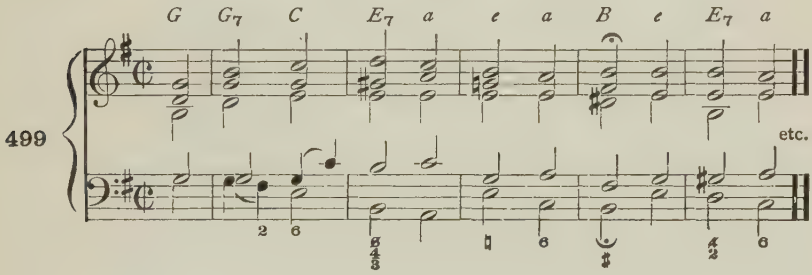
Parts frequently have to cross each other, especially the inner parts, as the leading of Alto II and Tenor in meas. 2 and 3 shows.

Chorales are excellent material for practice in five-part writing. As an example we give the following:

497



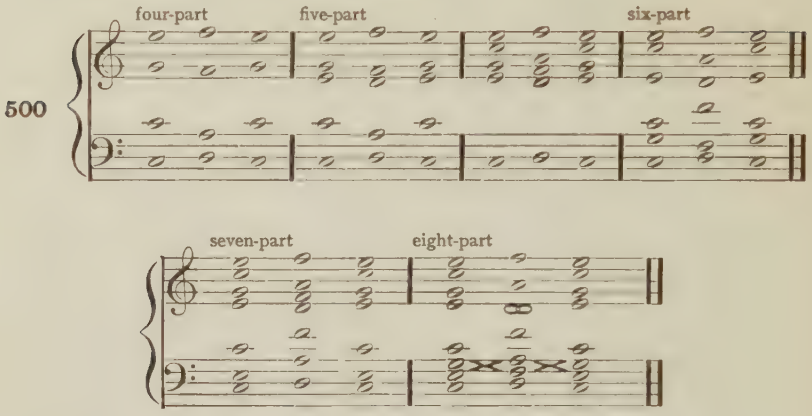
Our work with five or more parts requires a simple and natural bass progression; the less artificial and difficult this progression, the clearer and more intelligible will be the succession of harmonies. Here this point is the more important, because very unintelligible progressions may result from the fullness of the chords coupled with the necessity for a free movement of the parts.

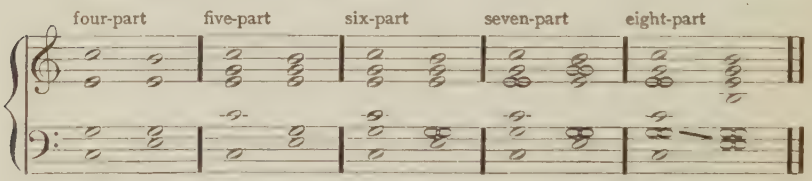
The above exercise begins thus:

For the repeat, the following chord-succession may be used:

CHAPTER XXV

Six-, Seven- and Eight-Part Harmony

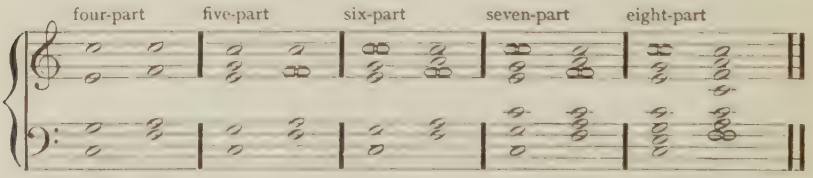
The necessity for doubling or trebling intervals increases with the number of parts involved. When the parts are led independently, it also happens that they will cross each other. The greatest simplicity of harmonic progression becomes a still more essential condition for success in writing such polyphonic movements; and we should add, that some chords are not at all adapted for this style, since some of their intervals, inasmuch as they must follow a fixed progression, cannot be doubled — for instance, the altered chords and the diminished seventh-chord.

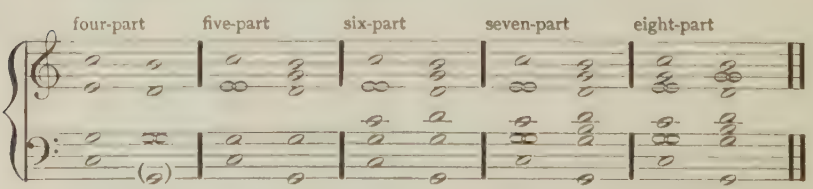
Certain progressions of the triad are illustrated below.

(*a*) Progression to the *second* degree:

(*b*) Progression to the *third* degree:



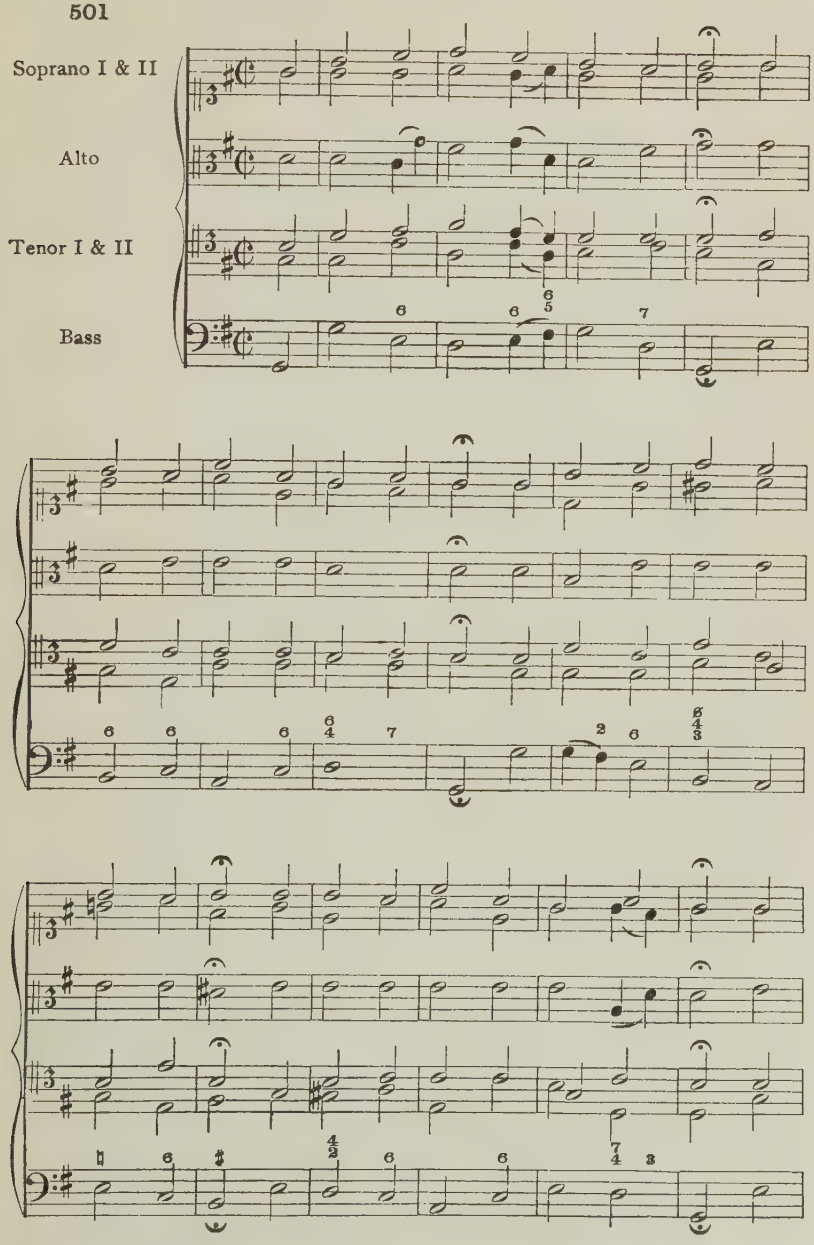
(*c*) Progression to the *fourth* degree:

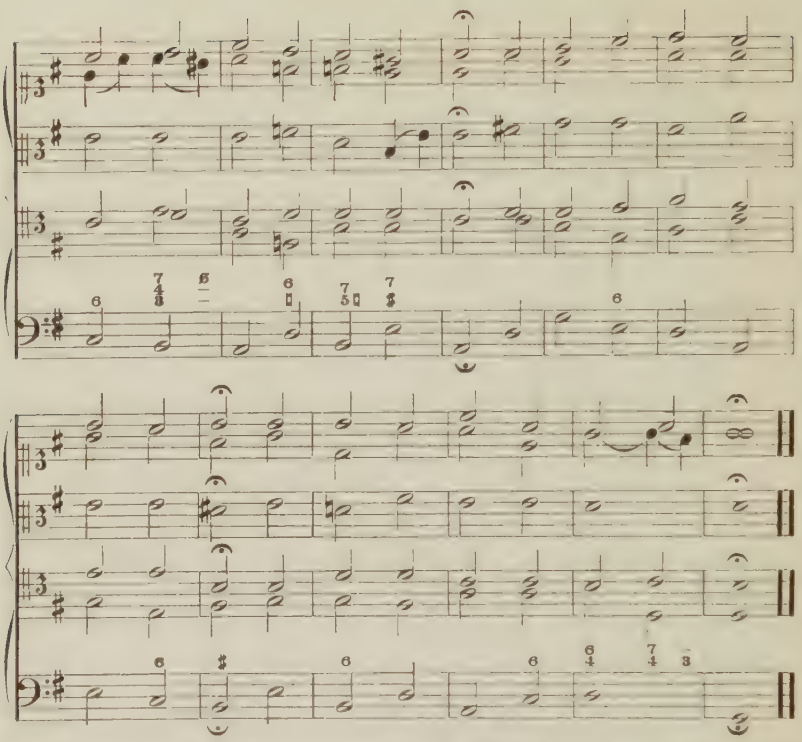


(*d*) Progression to the *fifth* degree:

We omit further combinations, experiments with which, using all the inversions, will be of great utility.

The way to conduct the part-leading is exemplified below in the six-part harmonization of Chorale No. **497**:

501

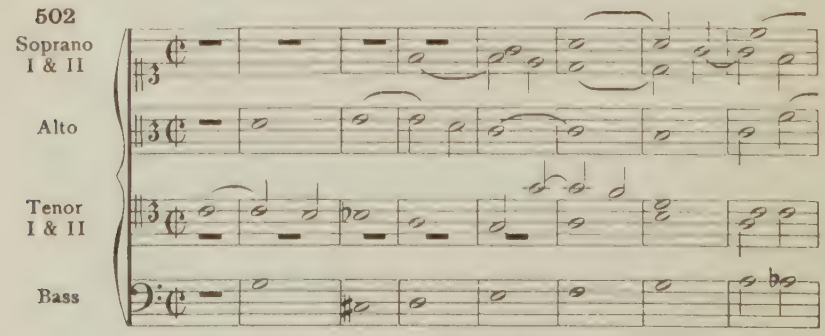




As in polyphonic chorus-movements not all the parts are continuously effective, as they are in the accompaniment of a Chorale, the movement is quite often carried on by only three or four parts, and becomes intensified when other parts join in.

The following examples illustrate this species of chorus-movement, and likewise go to prove that even in such polyphonic work suspensions and passing-notes may be introduced without damage to clearness and intelligibility.

502



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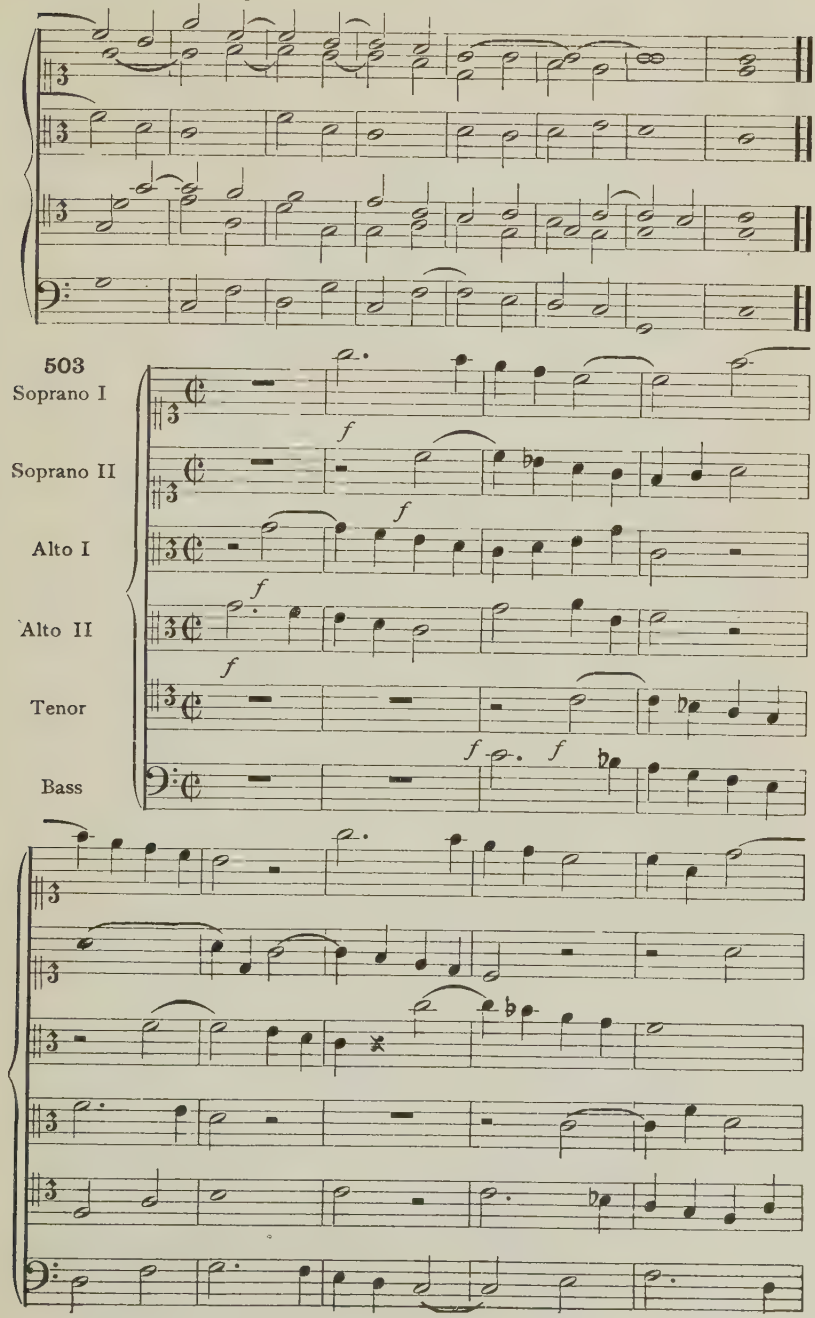

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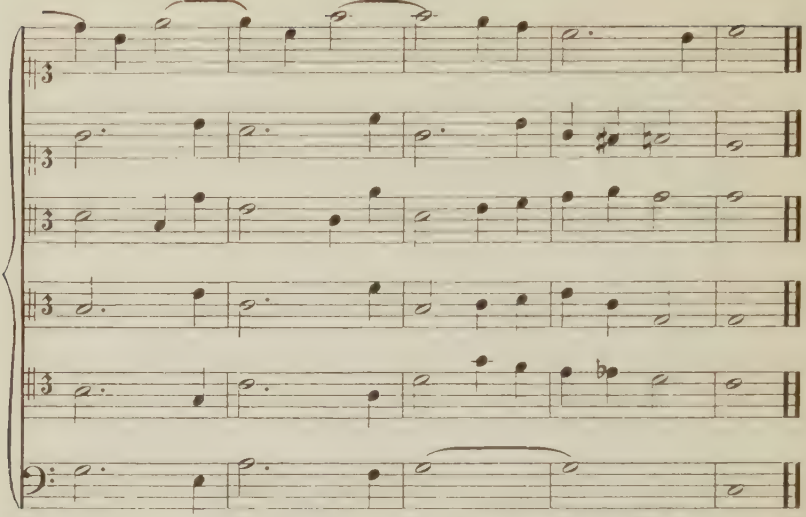
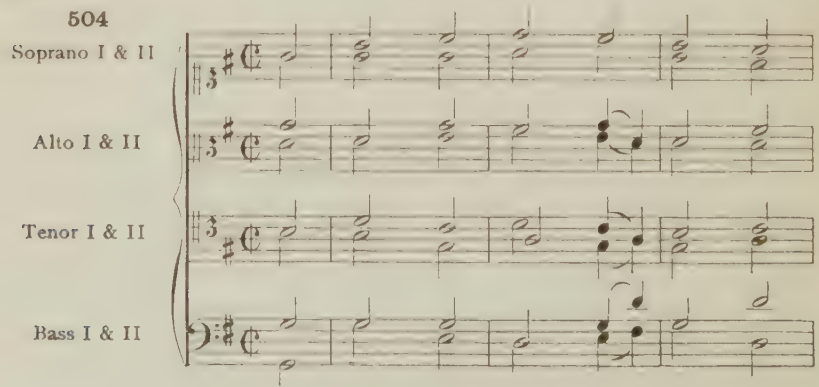


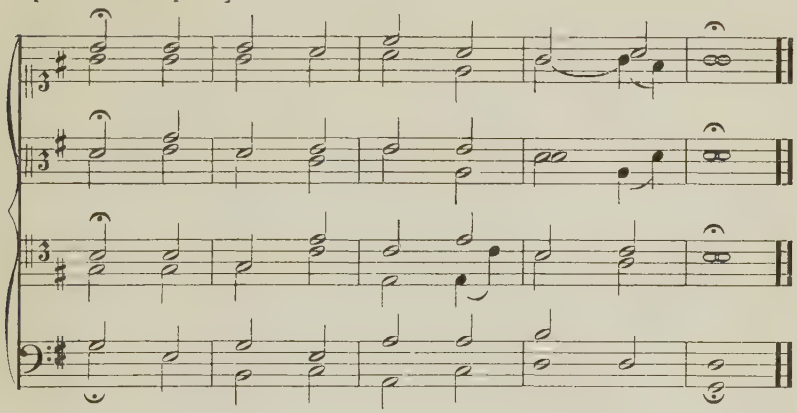
In eight-part chorus-writing, for which, as a rule, each of the customary four voices is divided into a "first" and "second" part, these four pairs are not always used as eight independent parts, which might easily make the harmony too full, but, instead, two voice-parts of like character go together in unison (*e.g.*, two sopranos, two altos, or two tenors and two basses in unison), the movement thus appearing in four-, five- or six-part harmony. Sometimes, too, the eight voice-parts are divided into two separate and independent choirs, which sing together only in certain passages.

As a specimen of the peculiar manner in which some of these parts have to be led, we add the beginning of our last Chorale, set in eight parts:

504



[continued from p. 212]



In polyphonic choral compositions which are divided up between different choirs, the difficulty of this style of writing is mitigated by the circumstance that the parts are often contrasted by their different *metrical* progression as well as by *tonal* diversity in the part-leading, when two or more choirs sing together; but always with the condition that the chord-progression proceed in the simplest manner, and never with rapid changes. This mode of treatment is generally meant when choruses and movements in twelve or sixteen parts are spoken of; we find but few pieces by Bach in which eight or more parts (not counting further instrumental parts) are carried out *obbligato*.

For our present purpose these hints on polyphonic writing will suffice — especially as further details may be left to private study and individual inclination for this branch of composition — always provided that harmony has been thoroughly mastered. Concerning its application we shall merely add that the above-described mode and style of polyphonic writing is mostly employed in choral composition. Instrumental music (*e.g.*, orchestral works) is not carried out in parts to such an extent as the participation of so many instruments would seem to imply; four-part harmony will suffice for the majority of orchestral pieces, and concerning its development in this field we must refer the student to a *real* Method of Instrumentation, since the conditions controlling the doubling of intervals, though often approximating those in our exercises, depend on different principles.

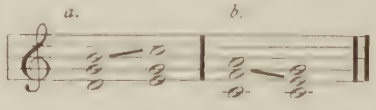
CHAPTER XXVI

The Forms of the Musical Close

A close — that is, the ending of a piece, or of a musical period, or of a more or less lengthy series of harmonies — can be effected by connecting the tonic triad with a preceding triad belonging to the same key and not too closely related to the tonic chord. Hence, the triads on the third and sixth degrees are not adapted for forming a close, the former having the minor Third *e–g*, and the latter the major Third *c–e*, in common with the tonic triad. As Hauptmann very rightly observes, a *Close* presupposes *Contrast, Separation* — that is, a combination of elements which contrast with, or differ from, each other in the main — *so that chords too closely linked together cannot, in successive progression, form a close.*

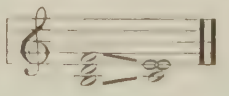
The *dominant* and *subdominant triads* are those best suited for effecting a close. The Fifth of the tonic triad is the root of the dominant triad; the Fifth of the subdominant triad is the root of the tonic. Thus they are united by a bond which is not so strict as to hamper the progression of the other parts. For the Third in the dominant triad (the leading-tone of the key) presses upward, and the root of the subdominant triad downward; in the former case the natural resolution is to the root of the tonic triad, in the latter case, to its Third:

505



After the dominant and subdominant triads, the *diminished triad* takes rank as a factor in forming the close. Its root is the leading-tone, whose natural relation to the tonic triad is familiar to us; and the diminished Fifth, like all dissonances, requires resolution:

506

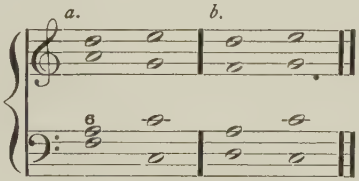


In a certain sense this may be termed a "complete" close, since the key as such unquestionably manifests itself in the connection of these two triads, which is not the case with the two closes shown above (No. 505) with the dominant and subdominant triads, in which the introduction of the triad on the second degree, or the dominant Seventh, is

required for certainty. Still, it is classified among the "incomplete" closes, and but seldom employed in the above shape, because of the undecided leading of the bass and the resolving of the soprano to the Third — a resolution which cannot produce a fully satisfactory effect. On the other hand, the first inversion of the diminished triad may be advantageously used in closing formulas, as we shall see further on.

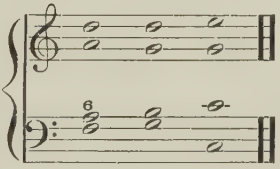
The *triad on the second degree* is also not wholly unsuited for effecting a close. It apparently stands in no near relation to the tonic triad, but is decidedly affiliated with the dominant chord, the Fifth of the latter being its root. In the sequel, therefore, we shall find this triad very peculiarly adapted to round out the close in connection with the dominant triad. But it may also be directly connected with the tonic triad. Of these two examples:

507



the first, at all events, is well fitted to finish off a musical period, despite the omission of the dominant triad; for we must imagine this progression as arising from

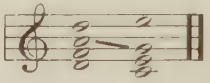
508



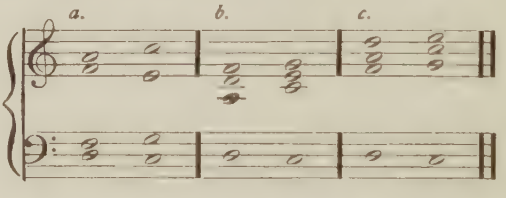
Note. — The intimate relation of the triad on the second degree to the tonic triad may also be explained differently. We know that the relation of intervals, in their natural (*i.e.*, not tempered) state is expressed by the following figures — the octave by 1 : 2 ; the Fifth, 2 : 3 ; the Fourth, 3 : 4; the major Third, 4 : 5; the minor Third, 5 : 6; the larger whole tone, 8 : 9; the lesser whole tone, 9 : 10. Now, as the Fifth *c–g* consists of the larger whole tone *c–d* plus the perfect Fourth *d–g*, while the Fifth *d–a* consists of the lesser whole tone *g–a* plus the perfect Fourth *d–g*, we get different ratios for the two Fifths. For $8 : 9 \times 3 : 4 = 24 : 36 = 2 : 3$, which is the absolutely perfect Fifth; whereas $9 : 10 \times 3 : 4 = 27 : 40$. This latter ratio being narrower than the former, it is quite evident that *d–g* is not an absolutely perfect Fifth. This fact occasioned Moritz Hauptmann, who subjected this point to minute and ingenious investigation, to classify this Fifth as diminished. The difference between these two Fifths has *very little practical bearing*, however, on the problems of harmony-teaching. We have accepted the tempered system, and in this system *d–a* equals *c–g*. It is by no

means advisable to call the attention of beginners to this theoretical difference, especially when their preparatory scientific study has been scanty; for they find it hard enough, at best, to familiarize themselves with a multiplicity of conceptions which are wholly novel to them. It is for the teacher to bring up this point when they have arrived at a certain maturity of musical intelligence; *for however little bearing this difference may have on the practical study of harmony, we cannot deny that it has an actual basis in natural conditions.* A progression like this:

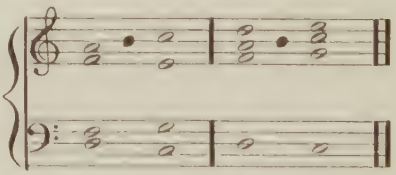
509



has, in spite of the open Fifths, a not wholly unsatisfactory effect, owing solely to the resolution of the — we might say, "potential" — dissonance *a*. And therefore we shall see that wherever the Fifth has this resolution, based on the natural relations, the connection of the triad on the second degree with the tonic triad will generally produce a *natural effect not wholly inappropriate* to the formation of a close; whereas, in cases where this resolution does not take place, the minor character of the triad is far more strongly in evidence. In the following chord-connections:

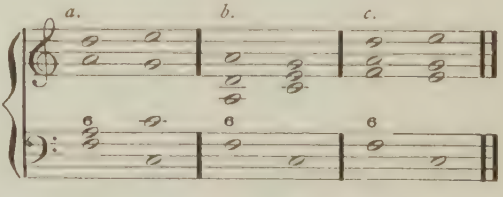
510

example **b** is not in the least adapted for a close; and **a** and **c** only if we imagine an intermediary *b* introduced in this fashion:

511



Contrariwise, the following connections:

512

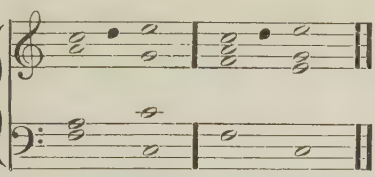


when *cleverly introduced and prepared*, are quite well adapted to serve in closing a musical period.

Besides, the chord-connections at **a** and **c** in No. 512 may also be conceived as *plagal closes* (*q. v.*), and, in point of fact, various theorists have accepted them in this

significance. For, taking into consideration that here the soprano presses toward the Third of the tonic triad, this soprano *d* has the effect of a passing-note, so that we may imagine the connection to be based on the following:

513



But now we shall dismiss the triad on the second degree as adapted only in *exceptional cases* for bringing on a close, and devote our attention exclusively to the three triads previously mentioned — the dominant, subdominant and diminished triads.

I. Closes Formed with the Dominant Triad

Closes formed by means of the dominant triad are classified as

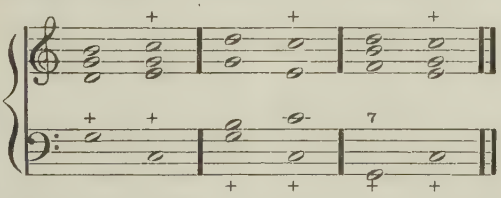
(*a*) The Full Close;

(*b*) The Half-close;

(*c*) The Deceptive Cadence.

The Full Close is either *complete* or *incomplete*. It is *complete when the soprano takes the root of the tonic triad, while the bass takes the roots of the dominant and tonic triads in succession;* for example:

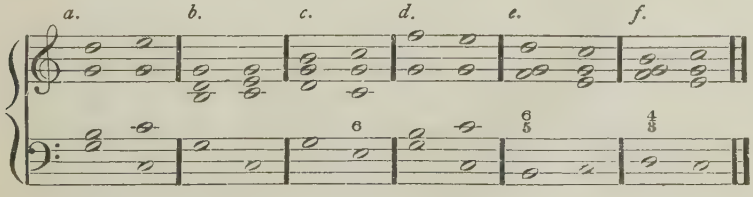
514



Note. — On account of its decisive character, the complete full close is best fitted for ending a piece of greater or less length, or a musical period.

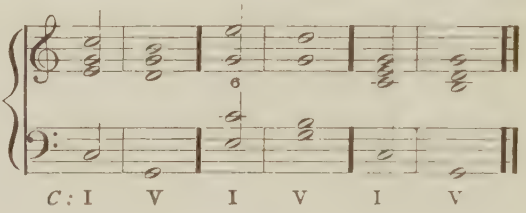
The Full Close is *incomplete* in any other case; *that is, when the soprano takes the Third or Fifth of the tonic triad, or when the bass forms an inversion either of the dominant triad (or seventh-chord) or of the tonic triad;* for example:

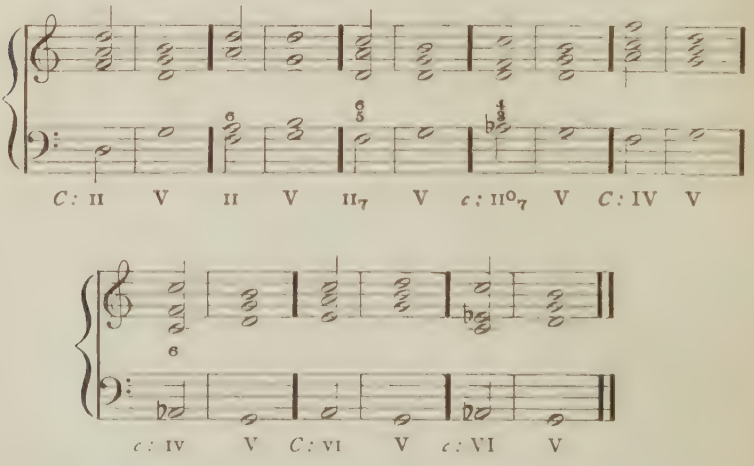
515



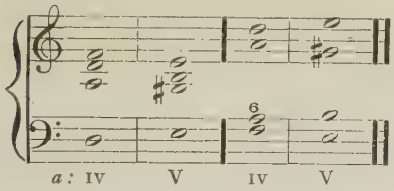
NOTE. — The incomplete full close is also admirably adapted for ending a musical period of which the next is a continuation; but for ending a piece it can be used *only under certain conditions.* Forms of the close like those in No. 515a and b can be of good effect only when the development of the composition is broad and tranquil. The latter in particular, and more especially in open harmony, possesses a strange, mystical tone-coloring, and for this reason is frequently employed by opera-composers of romantic tendency. — A progression like the one at c *cannot be considered with reference to the final close of a composition, because the bass must finish on the root of the tonic triad.*

The Half-close consists in *the progression of the tonic triad to the dominant triad.* So here their relations are reversed:

516

Instead of the tonic triad, *some other frequently occurs;* most frequently the triad on either the second or the fourth degree, and sometimes that on the sixth degree.

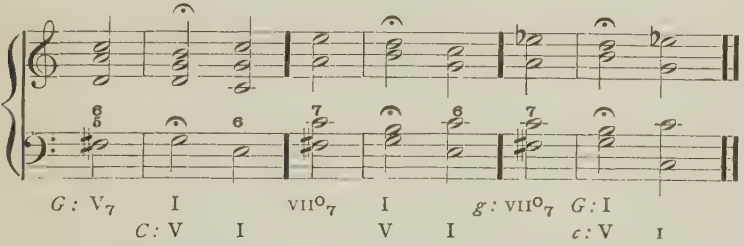
517

A peculiarly *effective* and *much used* half-close is the so-called *Phrygian close, resulting from the connection of the subdominant triad in minor with the dominant triad, and conditioned by the peculiarities of the Phrygian Mode* (see p. 179):

518



Among the half-closes were formerly reckoned those modulations to the key of the dominant which are chiefly effected by means of the $\frac{6}{5}$ chord or the seventh-chord on the seventh degree:

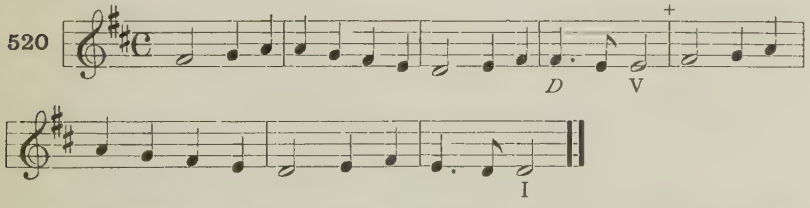
519



The modulation into *G* major is, however, regular in each example and therefore rather to be regarded as an incomplete full close; the relation to the tonic triad of the principal key being latent, and manifesting itself only in what may follow.

Note. — As the half-close does not really finish, but only forms a point of rest, introducing something new, and making such continuation necessary for self-justification, it follows that *it is not adapted for the ending of a piece.* But even this rule has its exceptions. The Phrygian Close, which is likewise a half-close, is often used as an ending of church compositions, and, when properly prepared, seldom fails to produce its peculiar and charmful effect. Otherwise, as already mentioned, the half-close serves mainly to unite two (often similarly constructed) phrases. Examine, for instance, the melody in Beethoven's Ninth Symphony, "Freude, schöner Götterfunken":

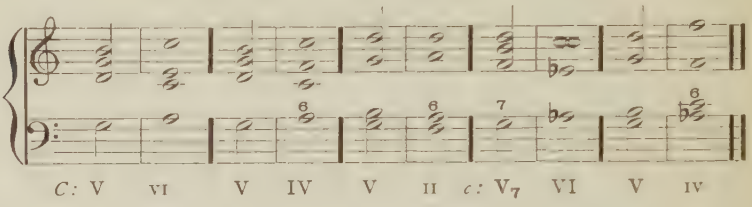
520



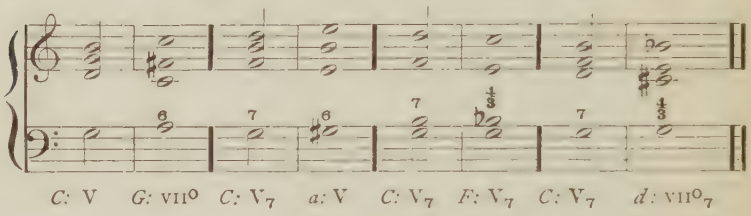
Here the half-close prepares the passage from fore-phrase to after-phrase, its effect being to prevent the fore-phrase from seeming complete in itself. The regular recurrence of full closes, aside from the impossibility of continually employing them, would produce only a feeling of monotony, incoherence, dissociation; whereas the half-close, *set in the right place, facilitates the interconnection of the several divisions, and maintains the natural musical flow.*

The Deceptive Cadence is the resolution of the dominant triad, or the dominant seventh-chord, to some other than the tonic triad* (which one naturally expects); for illustration:

521



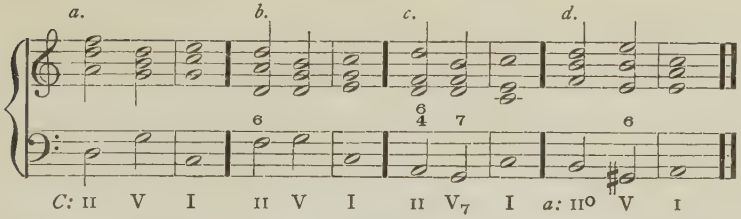
The resolution may also proceed to a harmony foreign to the key:

522

Formerly even the resolutions of the dominant harmony to the chord of the Sixth of the tonic triad were reckoned among the deceptive cadences; for example, the progression in No. 515c. But here the resolution to the tonic triad actually occurs, even if not with the decisiveness requisite for the close of a piece.

NOTE. — The deceptive cadence cannot, of course, serve as the ending of a piece; but it may be used, like the half-close, for the ending of a verse line (in Chorales), or of a period *which finds its completion in a following period*. It is of *great utility* in compositions of a dramatic character; for then it serves, when brought in with effective emphasis, both to interrupt one musical idea, and to introduce some new one demanded by the dramatic situation.

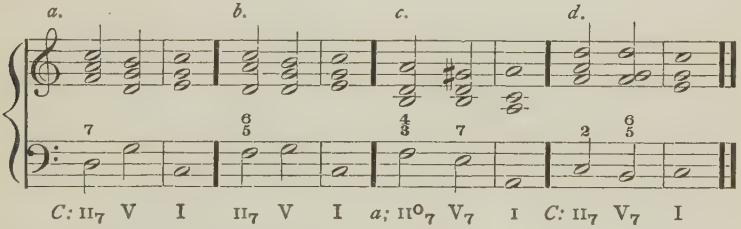
Having occupied ourselves so far only with the forms of the close itself, it now behooves us to include within the scope of our investigation those triads which are suitable for *introducing* the close proper. And here, again, we find that *essentially contrasted* elements are best adapted for the purpose. The triads on the third and seventh degrees are not to be considered at all, being too closely related to the dominant triad. *But the triads on the second and fourth degrees are peculiarly fitted to prepare a close effectively;* more especially the former:

* Also called the Interrupted, Avoided, Broken, or False, Cadence.

523

Notice that Example **c** requires a careful introduction of the $\frac{6}{4}$ chord.

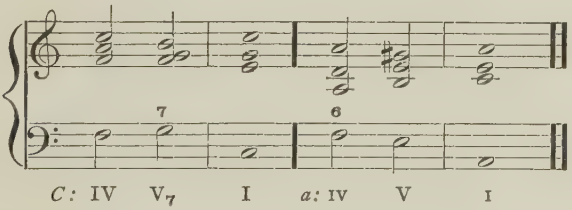
Equally well fitted appears the seventh-chord on the second degree, with all its inversions:

524



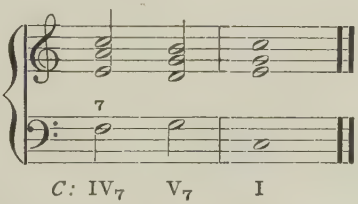
Then the subdominant triad with its first inversion:

525



On the other hand, the seventh-chord on the fourth degree is scarcely available. A progression like this:

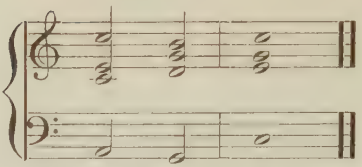
526



however carefully prepared the Seventh may be, has a harsh and unpleasant effect under any conditions.

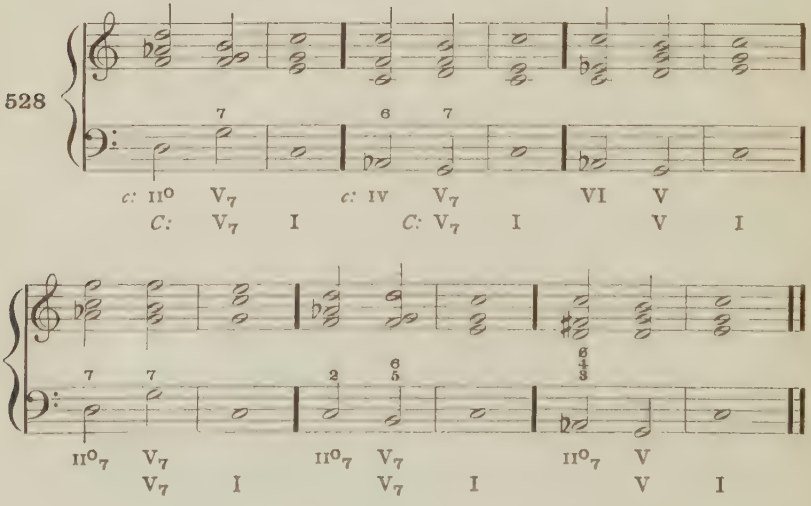
The triad on the sixth degree is also not ill adapted to introduce a close, as the following example proves:

527



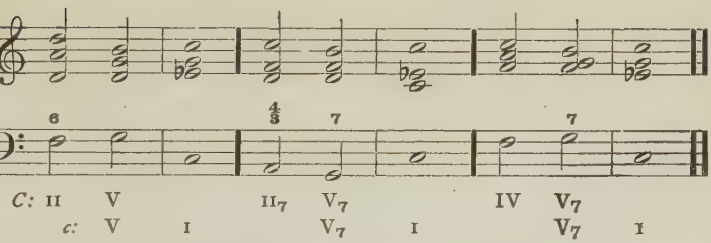
Besides these triads there are *others, foreign to the key, but belonging to related keys*, which we can employ in this manner. Taking *C* major (as ruling key), the dominant triad will be *G–b–d*. Now, *G–b–d* is not only the dominant triad in *C* major, but the same in *c* minor, and also the tonic triad in *G* major. It follows, *that certain harmonies belonging to the keys of* c *minor and* G *major, standing in harmonic relation to the triad* G–b–d *and, to some extent, finding their natural resolution in that triad, will form a very suitable medium for introducing the dominant triad belonging to the key of* C *major.* In *c* minor, such triads are those on the second, fourth and sixth degrees, besides the seventh-chord on the second degree, and the augmented chord of the Sixth, and of the Third, Fourth and Sixth, derived from the seventh-chord on the second degree. For illustration:

528

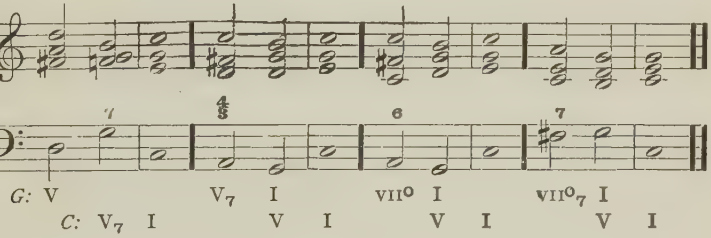


All these examples are good and available.

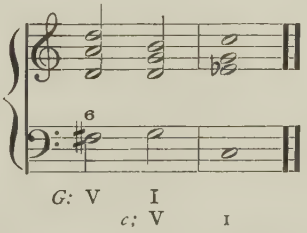
The reverse case, when a close in minor is introduced by triads belonging to the parallel major key, is of much rarer occurrence. Closing formulas like these:

529

are seldom used. This is a natural consequence of our feeling that the close in major is the more complete and satisfactory, and that the succession of minor after major involves a weakening of the effect; whereas the examples under No. 528 exhibit precisely the contrary.

In the dominant key, the triads on the fifth and seventh degrees, and their seventh-chords, are peculiarly adapted for the advantageous preparation of the dominant chord of the principal key. For example:

530

Here the close may just as well be in minor:

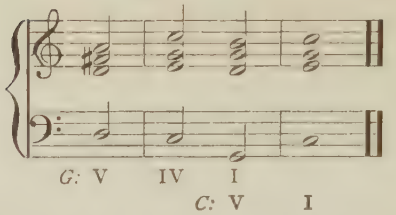
531



for the key of *G* major, into which we modulate, is intimately related to both *C* major and *c* minor, so that the ending must be equally satisfactory in either.

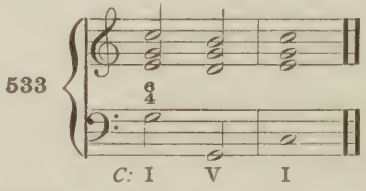
The subdominant triad of the key of the dominant cannot be used for introducing the dominant triad of the ruling key. For the subdominant triad in *G* major, *C–e–g*, is at the same time the tonic triad in *C* major, and the premature entrance of this triad decidedly weakens the closing effect:

532

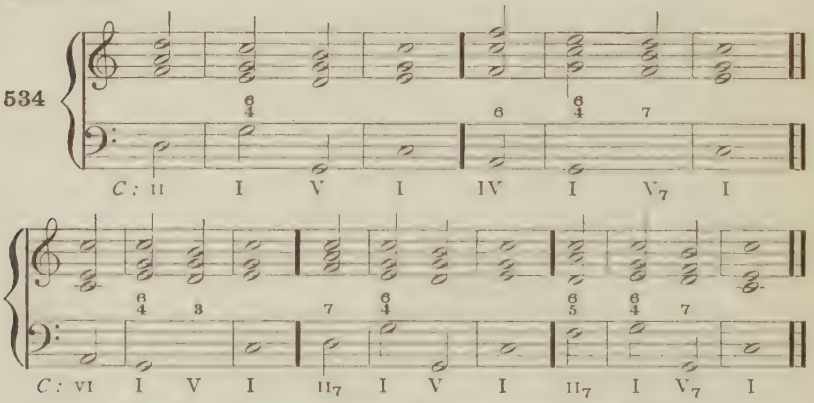


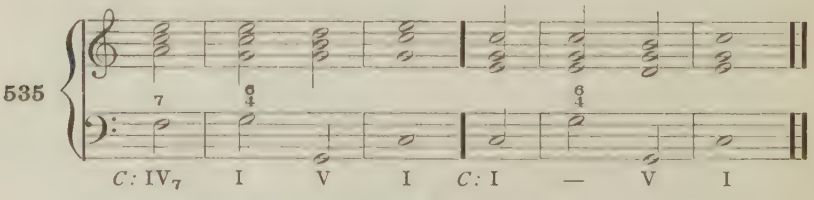
One of the most important and most frequently occurring closing formulas is that with the $\frac{6}{4}$ *chord of the tonic triad:*

533

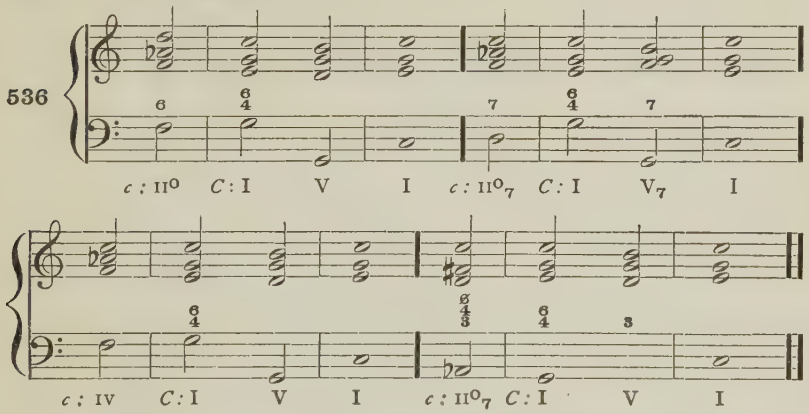


For introducing the $\frac{6}{4}$ chord all *the diatonic chords* will serve, *which were found proper for the introduction of the dominant triad;* namely, the triads on the second, fourth and sixth degrees (the last under certain conditions), together with the seventh-chord on the second degree. For illustration:

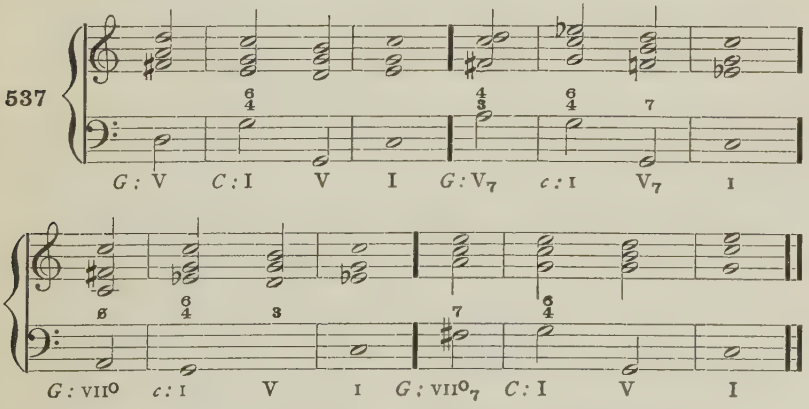
534

Besides these, the seventh-chord on the fourth degree, and the tonic triad itself; *e.g.*,

535

Furthermore, all *chords foreign to the key* which may be used to bring in the dominant triad. These chords, as we have seen, are the triads on the second and fourth degrees, and the seventh-chord on the second degree, of the parallel minor key:

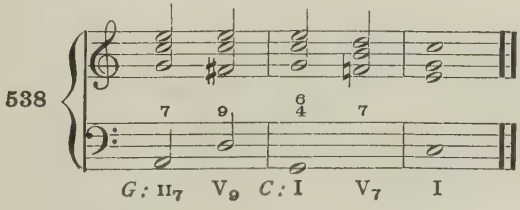
536



and also the triads and seventh-chords on the fifth and seventh degrees of the dominant key:

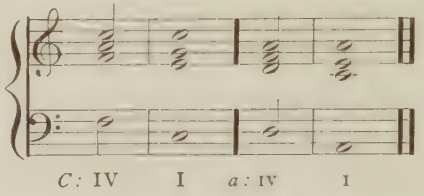
537

The ninth-chord on the fifth degree may also be used for this purpose with fine and charming effect; but the Ninth requires good preparation:

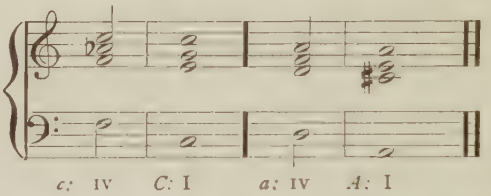
538



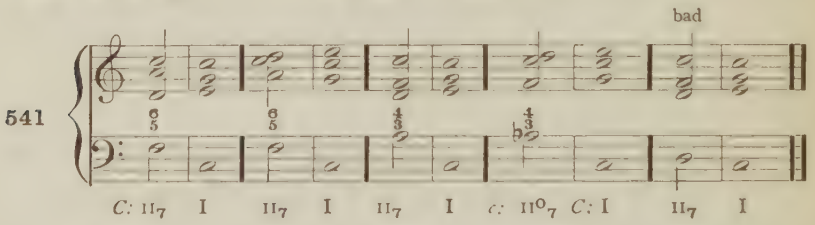
II. Closes Formed with the Subdominant Triad

The progression from the subdominant triad to the tonic triad is called a Plagal Close (to distinguish it from the *Authentic Close*, the term used for the progression from the *dominant* triad to the tonic triad):

539

Compositions in minor very often end in major; for example:

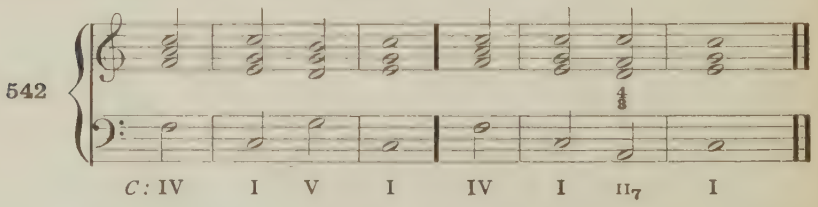
540

As a plagal close is also classified *the progression of the seventh-chord on the second degree to the tonic triad;* for example:

541

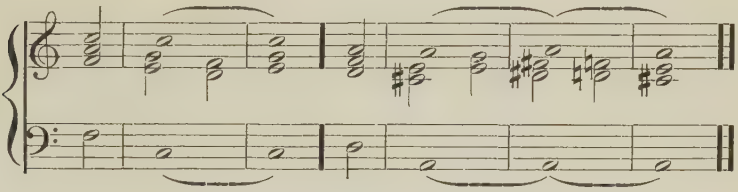


In all these cases *not c*, but *d*, is the dissonance (see p. 78); *d* is to be regarded as a passing-note between *c* and *e;* and for this conception the resolution, which must here be effected to *e*, is a sufficient warrant.

In order to intensify the effect, the plagal close is often followed by the authentic close, or by a second plagal close. For illustration:

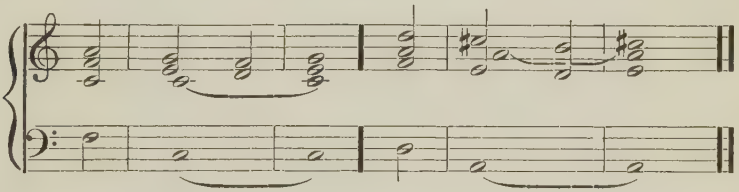
542

It may also be intensified by an organ-point of greater or less length:

543

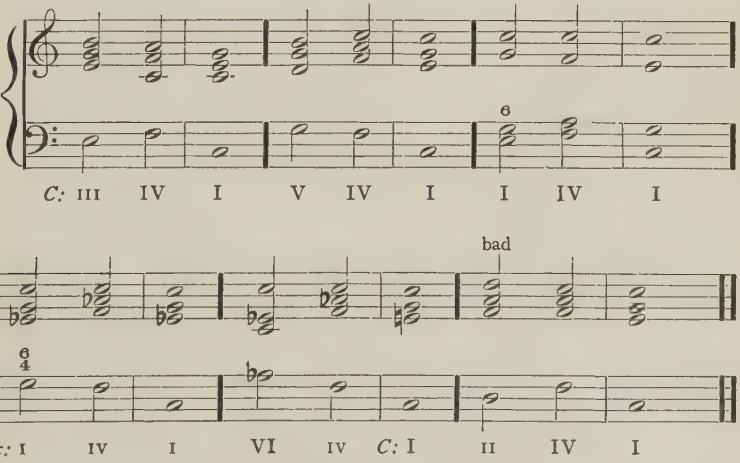


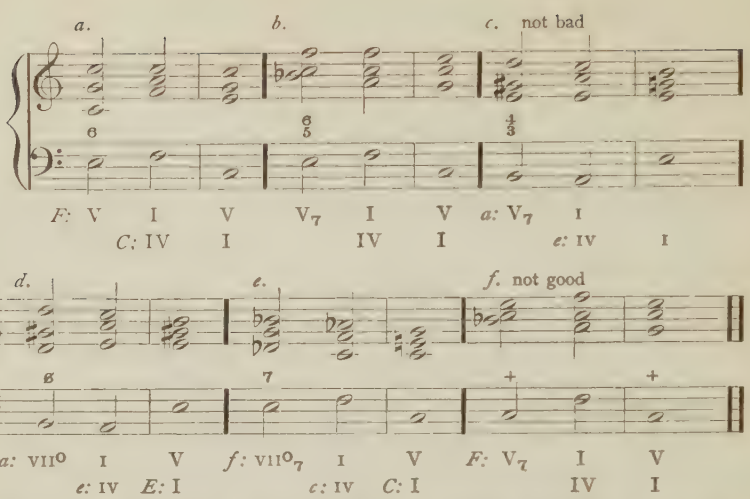
This latter case occurs especially when the soprano closes on the Third or Fifth:

544

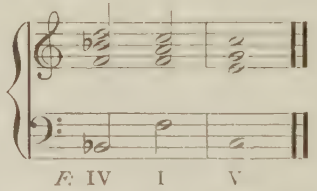


For *introducing* the plagal close, *the triads on the third and fifth degrees are the best among the diatonic chords.* The triad on the seventh degree is *not at all* adapted for this purpose, and that on the second degree *very little;* the triad on the sixth degree is better:

545

Among chords *foreign* to the key, the only ones proper for this purpose are triads and seventh-chords on the fifth and seventh degrees of the subdominant key:

546

But *setting the root in the bass*, as at **f**, *decidedly weakens* the effect. Moreover, the employment of the subdominant triad belonging to the key of the subdominant *is not permissible*. The following example:

547



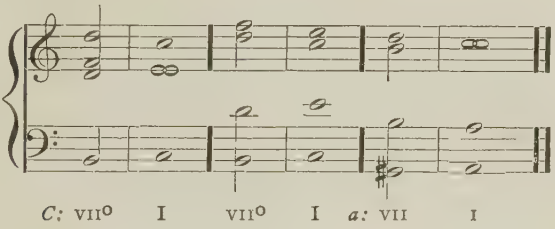
would most assuredly not be taken for a plagal close in *C* major, but for a *half-close* in *F major*.

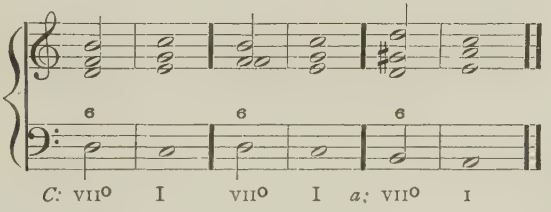
NOTE. — In former times the plagal close was commonly classed among the half-closes. But it is adapted, from every point of view, to form the final ending of a piece; hence, it is a full close in the strictest sense of the term. To be sure, it does *not in the least* differ from a half-close in its *formation*, but all the more essentially in its *effect*. For the rest, it is rather seldom used, because it cannot be readily introduced everywhere. But, rightly placed, *its effect is admirable*, especially where the harmony is tranquilly and broadly developed, and in sacred music; recently it has been employed a good deal in secular composition. It is not so well suited for closing a period, for there it will often assume the character of a half-close.

III. Closes Formed with the Diminished Triad on the Seventh Degree

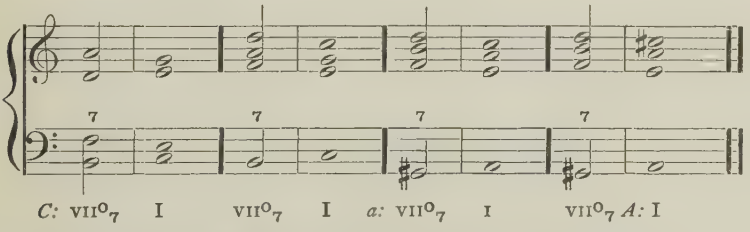
As already remarked, the progression of the diminished triad on the seventh degree to the tonic triad is, on the whole, *little used* for effecting a close. As a reason, the *unsatisfactory bass progression* was mentioned.

Besides, in four-part harmony it is not infrequently difficult to double an interval in the diminished triad in a suitable manner. For, since the *leading-tone* cannot be doubled, and the *diminished Fifth must* be led downward, to avoid open Fifths with the bass, the only available interval for doubling is the Third:

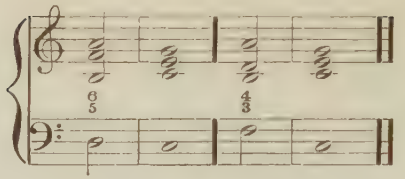
548

Manifestly, however, these progressions yield a very weak close, so that their employment need not be considered. But in its first inversion the triad proves to be *available:*

549

Here the progression of the parts is *natural*, the relation to the tonic triad is *maintained in its full integrity*, and the *bass progression* is noticeably *stronger* than in the examples under No. 548.

The seventh-chord on the seventh degree can also be used in forming closes:

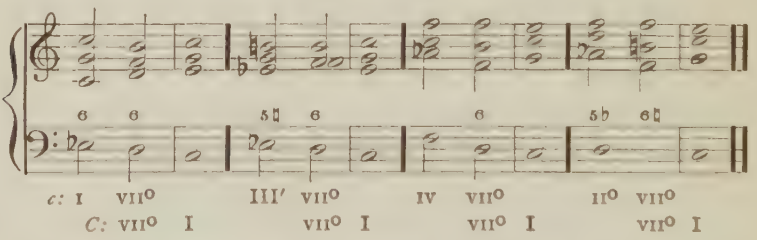
550

although some of these progressions, in so far as the resolution takes place to a major triad, *assume the character of half-closes.* In its inversions, however, this chord is *not available.* Of the following examples:

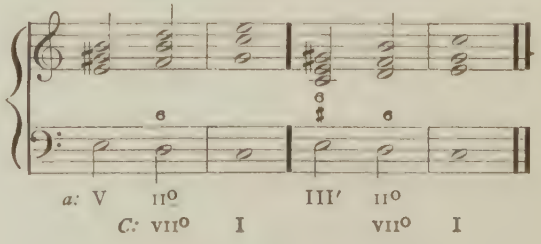
551



the first is *impossible* on account of the Fifths, and the second, although the part-leading is satisfactory, has a *too undecided effect* for a genuine closing cadence.

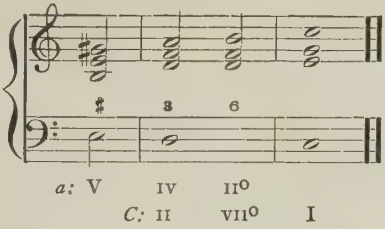
For *introducing* the diminished triad in major *almost all triads belonging to the key are adapted*, especially those on the first, second and fourth degrees; those on the third and sixth degrees, less; and the dominant triad *not at all*. In minor the best triads for the purpose are those on the first and third degrees; the introduction by the triads on the second and fourth degrees has to be handled *carefully* on account of the unmelodic augmented Second; the introduction by the triad on the fifth degree *cannot be effected at all*, and by the triad on the sixth degree *hardly ever*. Among harmonies *foreign* to the key, a few belonging to the *parallel minor key* are adapted for preparing a close in major, namely, those on the first and third degrees, and (when carefully introduced) those on the second and fourth degrees:

552

But, as already explained, the reverse progression from major to minor is not admissible. The harmonies belonging to the relative minor key appear to be *scarcely usable* for our present purpose. The following progressions:

553

sound *extremely ill*, for no *necessary* harmonic connection is apparent, and the necessity for avoiding the step of the augmented Second affects the part-leading unfavorably.

The form below would seem more acceptable:

554



for here the triad *d–f–a* may just as well belong to *C* major as to *a* minor.

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